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ABSTRACT

This report examines American River College (ARC), California, over a 5-year period from 1996-2001. It looks specifically at access, student assessment, overall student academic success, freshman success, performance in sequence courses, persistence, and rates for degrees, certificates, and transfer. ARC has experienced a 35.9% increase in unduplicated student count from 5 years ago, from 21,205 to 27,784. Summer enrollments during that period have increased from 6,909 to 10,534. The current issue is how to accommodate further increases. In addition, ARC student success rates have increased 1.5% from 5 years ago. The lowest success rates, however, are in English and math. The report correlates success with gender, ethnicity, and age of student. Being female, Asian, and older, correlate with higher success rates. So does being an ESL student and being affiliated with a student service. The freshman success rate for individual courses ranges from 38% to 87%. As a result, the report suggests that some courses should be deferred until the student is more accustomed to academic rigor. Associate degrees are up 17%, while certificates are up by 163%. Transfer ready and actual transfer rates have also increased. (Contains 67 figures.) (NB)

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Institutional Effectiveness: A Five-Year Profile 1996-2001

Report Prepared by:

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March 2002

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Summary Findings

- ARC has experienced a 35.9% increase in unduplicated student count from five years ago. The current issue is how to accommodate any further increases. Room space is but one of many important concerns. Diversity also continues to increase, prompting rapid adjustments by the college in order to meet the needs of a diverse enrollment.

- The Compass Test used with new students for course placement purposes is not recommended for continued use. The correlations between Compass scores and final grades in specific courses are much too low to use with helping reach course enrollment decisions.

- Overall student success rates have increased about 1.5% from five years ago. Unfortunately, the lowest success rates are found in the required subject areas of English and math.

- It is important to distinguish between two groups of new freshmen. One is the recent high school graduate. The other freshmen group is simply made up of all those who did not recently graduate from high school. These two freshmen groups differ substantially in enrollment patterns and in various achievement rates. Irrespective of what type of freshmen is being considered, both present an at-risk profile.

- Success rate is correlated with the following characteristics: gender, ethnicity, and age. Being female, Asian, and older correlate with higher success rates. So does being an ESL student and being affiliated with a student service.

- There is a tremendous difference in freshmen success rates from one course to another, the absolute range being 38% to 87%. As such, there are many courses that new freshmen might possibly defer until such time when they have had more experience with academic rigor.

- The benchmarks of achievement approach is an effective way of illustrating the stages of relatively long-term goal attainment for any type of student group or characteristic. For example, Asian and ESL students have the highest rates of progression through various checkpoints of earning units and being awarded an associate degree or becoming ready to transfer. Students affiliated with a service on campus also have commendable rates of various achievements.

- ESL students are the most academically successful students on campus. This applies to every conceivable cross tabulation, meaning across all age, gender, ethnicity groups, and 99% of courses.

- The awarding of associate degrees and certificates has increased from five years ago. Degrees are up by nearly 17% while certificates are up by 163%. Transfer ready rates, as well as actual transfers, have also been on the increase. Among all California public community colleges, ARC ranks 8th in combined transfers to UC and CSU.

- The average productivity figure for the past five years of fall semesters is 460 while spring semesters average to 448. There does not seem to be any discernible trend in productivity figures other than they vary from one year to the next.

Acknowledgements

It is certainly true that this institutional effectiveness report could not have been produced without substantial support from many individuals on the American River College campus. The support comes in the form of encouragement, financial backing and assistance. In this report ARC continues its proud tradition of examining and reporting all the data, regardless of whether that data enhances the college's image or brightly illuminates areas that need improvement. This willingness to publicly acknowledge both strengths and weaknesses creates a positive work environment and the freedom to say what needs to be said without having to put a "marketing spin" on less-than-desired outcomes. Indeed, ARC is a college that is open and even welcomes evaluation with the ultimate intent of improvement. Secrecy, selective omission of facts, and distortion will not be found here. One can presume that such an openness climate didn't just accidentally happen. The leadership of this college, found within management, within faculty and classified staff, has become acclimated to perceive institutional research as non-threatening.

For these reasons we wish to express our profound thanks to Dr. Marie Smith, President of American River College, and a model for being a change agent. Her administrative staff is also thanked for their continuing interest and solid support of research.

Sue Lorimer, Dean of Planning, Research and Development (and our boss), has provided much of her precious time to discuss issues with us and even review this report. We could not have asked for a better person in that job.

We also greatly appreciate the support of our colleagues who make up the research team at the Los Rios Community College District. Their work is a model for districts around the state.

Finally, we also want to thank the thousands of ARC students. They will never know it, but they are commended for their efforts at filling out what must be a very large number of scanner forms during their academic pursuits here. Without those darkened dots, the whole institutional research enterprise might sink. From those forms come all our information about student characteristics and many of their opinions as well.

Typical of each successive institutional effectiveness report, is the fact that the data analyses seem to get "deeper"(i.e., data mining) with each edition. This is due to a simple rule, "If you can, do it." Computer capacities are greatly improving as are the many programs written to produce a specific result. However, while the capability is present, we must also be cognizant of the weary reader going through many tables and charts and nearly drowning in data. We have tried to keep this in mind, but there is no evidence of our being successful. Perhaps it is best to say to a reader, focus upon what you are interested. If still interested, read further.

James E. Barr
Richard A. Rasor
Cathie Grill

March 2002

Table of Contents

Summary Findings ..... **iii**
Introduction **1**
Access: Five-year Enrollment Patterns **3**
  Fall/Spring Course Enrollments by Term 4
  Summer Enrollments by Term 5
  Sacramento Regional Public Safety Training Center Enrollments by Term (Summer, Fall, Spring) 6
  Fall/Spring Day and Evening Course Enrollments by Term 7
  Summer Day and Evening Course Enrollments by Term 8
  Day, Afternoon and Evening Course Enrollment Distribution (%) by Academic Year 9
  Course Enrollments for Area Across Five Academic Years 10
  Unduplicated Counts for Freshmen Students by Academic Year 11
  Course Enrollments for Freshmen by Academic Year 12
  Percent Unduplicated Counts by Gender and by Academic Year 13
  Percent Unduplicated Counts for Ethnicity by Academic Year 14
  Unduplicated Counts for All Ethnic Categories by Academic Year 15
  Percent Unduplicated Counts for Age Group by Academic Year 16
  Unduplicated Counts for ESL and non-ESL by Academic Year 17
  Unduplicated Counts by Academic Enrollment Status 18
  Informed Student Goal by Academic Year 19
  Unduplicated Counts of Recent HS Graduates Who Subsequently Enrolled at American River College (Rank Ordered on Five-Year Total) 20
  Percentages of Graduating High School Classes Who Subsequently Enrolled During Fall Semesters at ARC (Participation Rates) 21
  Percent Unduplicated Counts for Citizenship by Academic Year 22
  Percent Unduplicated Counts for TANF, Displaced Homemaker, Single Parent and Displaced Worker by Academic Year 22
  Percentages of Self-Reported Annual Household Income 23
    Summary of Access Section ***24***
    Implications for Planning ***24***
Introduction to ARC Compass Assessment Test Performance **25**
  English Placement Test (Compass) for English 1A, 58, 256 28
    English Writing Cut Scores 28
    ARC Normative Data 28
    English 1A Analysis 29
    English 58 Analysis 30
    English 256 Analysis 31
  Reading Placement Test (Compass) for English 4, 5, 71 (now 78), & 268/270 32
    English Reading Cut Scores 32
    ARC Normative Data 32
    English 4/5 Analysis 33
    English 71 Analysis 34
    English 268/270 Analysis 35
  Math Placement Test (Compass) for Math 51, 53, 15 36
    Math Cut Scores 36

ARC Normative Data for Math Placement (Compass) 36
ARC Normative Data for Math Placement (Compass) (continued) 37
Math 51 Analysis 39
Math 53 Analysis 40
Math 15 Analysis 41
Interpreting Table 6 Containing All Correlational Data 41
***Summary of Assessment Section* 43**
***Implications for Planning* 43**
Overall Student Performance: Success Rate the Basic Yardstick 45
Success Rates by Gender and ARC Totals by Academic Year 46
Success Rates for Major Ethnic Groups by Academic Year 47
Success Rates for Age Groups by Academic Year 48
Success Rates for Day, Afternoon & Evening Enrollments by Academic Year 49
Success Rates by Area for Five Academic Years 50
Grade Distributions and Success Rates for Self Reported Income (5 Academic Years) 51
Grade Distributions and Success Rates by Academic Course Level 51
***Summary of Student Performance* 52**
***Implications for Planning* 52**
New Freshmen Academic Performance 53
First-Term Success Rates for Recent High School Graduates, Other Freshmen, and Non-Freshmen by Academic Year 53
Freshmen Success Rate by Demographics (5 Academic Years) 54
High School Success Rates by 5 Academic Years 56
Freshmen First Semester Performance by Academic Area (Five Years) 57
Freshmen First Semester Performance by Academic Discipline (Five Years) 58
First Semester Freshmen Performance in Selected Courses 60
***Summary of Freshmen Academic Performance Section* 62**
***Implications for Planning* 62**
Student Performance in Subsequent Courses 63
English 256 to English 58 63
English 58 to English 1A 64
Math 205/210 to Math 51 65
Math 51 to Math 53 66
Math 53 to Any Transfer Level Math 67
***Summary of Subsequent Courses Section* 68**
***Implications for Planning* 68**
Measuring Persistence Through Benchmark Achievements 69
Overall Freshmen Benchmarks of Achievement 70
Benchmarks of Achievement for Recent High School Graduates and Other Freshmen 71
Benchmarks of Achievement for Female and Male Freshmen 72
Benchmarks of Achievement by Freshmen Ethnicity 73
Benchmarks of Achievement by Freshmen Age Groups 74
Benchmarks of Achievement by Freshmen Load Status 75
Persistence/Achievement by Freshmen Self-Reported Income 76
Benchmarks of Achievement by Freshmen In a Student Service 77
Benchmarks of Achievement by Freshmen In ESL 78
***Summary for Benchmarks of Achievement Section* 79**

Implications for Planning *79*

Student Service Groups **81**

Unduplicated Counts for Student Service Groups (Five Academic Years) 81

Percent Unduplicated Counts for Males and Females in a Student Service 82

Percent Unduplicated Counts of Students by Ethnicity and in a Student Service 83

Percent Unduplicated Counts of Students by Age Category and in a Student Service 84

Percent Unduplicated Counts for Freshmen and Non-Freshmen in a Student Service 85

Percent Unduplicated Counts for ESL Students Also in a Student Service 86

Percent Unduplicated Counts for TANF Students Also in a Student Service 87

Success Rates of Student Service Groups for Five Academic Years 88

Overall Success Rates for Student Service Groups Across Five Academic Years 89

Success Rates for Combined Student Service Groups by Demography 90

Summary of Student Service Section *91*

Implications for Planning *91*

English as a Second Language **93**

Success Rates for ESL & Non-ESL Students in on-ESL Courses 93

Success Rates for ESL & Non-ESL by Gender (Five Academic Years) 94

Success Rates for ESL & Non-ESL Students by Ethnicity (Five Academic Years) 95

Success Rates for ESL/Non-ESL by Age Group (Five Academic Years) 96

Success Rates for ESL/Non-ESL by Freshmen Status (Five Academic Years) 97

Success Rate for ESL/Non-ESL by Enrollment Status (Five Academic Years) 98

Success Rate for ESL/Non-ESL by Course Level (Five Academic Years) 99

ESL and Non-ESL Performance Across Academic Areas (Five Years) 100

Summary of ESL Section *101*

Implications for Planning *101*

Degrees, Certificates & the Transfer Function **103**

Overall Transfer Ready Stages 105

Transfer Ready Stages by Recent High School Graduates & Other Freshmen 106

Transfer Ready Stages by Gender 107

Transfer Ready Stages by Ethnicity 108

Transfer Ready Stages by Age Group 109

Transfer Ready Stages by Self-Reported Income 110

Transfer Ready Stages by Enrollment Status 111

Transfer Ready Stages by Student Service Groups 112

Transfer Ready Stages by ESL/Non-ESL 113

Direct Transfers: The CPEC Transfer Counts to CSU/UC 1996-2001 114

Summary of Degrees, Certificates, and the Transfer Function *115*

Implications for Planning *115*

Faculty Productivity **117**

ARC Productivity by Semester 117

Productivity by Area 118

Number of Sections Offered by Area for Five Academic Years 119

Average Course Enrollments by Area for Five Academic Years 120

Summary of Productivity Section *121*

Implications for Planning *121*

Introduction

The 2002 edition of Institutional Effectiveness captures the profile of American River College over a five-year period, from the summer and fall of 1996 through the spring semester of 2001. The student enrollment is growing so fast that the college must continually make rapid adjustments in all sectors. Hopefully, the findings in this report will make sense from what can be described as a blur of rapid college activities that have transpired these past five years. People have said that there is precious little time to "sit back, relax, and take it all in." Having little time to reflect on one's decisions before the next challenge presents itself, is becoming a familiar characteristic of our society - not only American River College or the Los Rios Community College District. As the pace quickens, a report such as this becomes quite important, for it provides us with a kind of photo still-frame that serves to establish who we are, where have we been, and where are we are likely going.

One can look at a college from several perspectives in order to understand not only what we do, but also how well we do it. Many snapshots of data are presented here and perhaps many others could have been included. The format decided upon closely follows the previous effectiveness report, namely access, student assessment, overall student academic success, freshmen success, performance in sequence courses, persistence (now measured by benchmark achievements), rates for degrees, certificates, and transfer. There is a detailed look at student services and ESL students as well as all sorts of cross-tabulations, e.g., success rates by student characteristics. Finishing the report is a section on productivity.

What has been left out in this particular report are the results from over a hundred surveys given as part of PFE projects and program review. The omission was deliberate. It is difficult to summarize one large survey, let alone over a hundred of them. The findings from major surveys have already been published elsewhere so they are not given additional treatment here. The findings from various instructional and student service programs reviews are also in a separate report, so they will not be discussed here. It should also be mentioned that the Research Office at Los Rios Community College District has published an extensive analysis of the surrounding community with detailed data breakouts by each college. The results of that external scan are not repeated here.

As was mentioned in the Acknowledgements section, one can become overwhelmed from what seems like endless data. To help with this, the institutional effectiveness report also includes summaries of each major section along with implications for planning.

Access: Five-year Enrollment Patterns

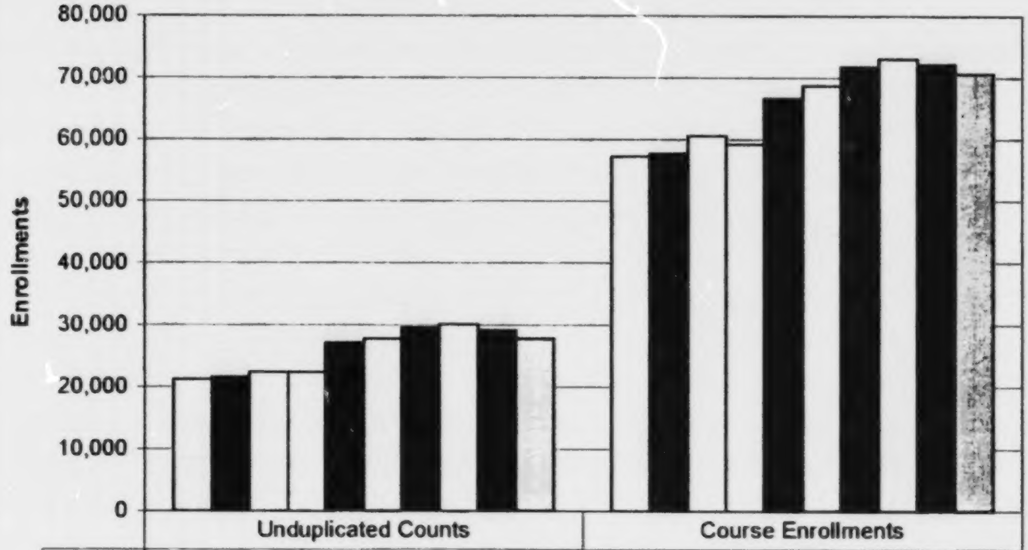
This section includes detailed information about ARC enrollments over a recent five-year period. In addition, each set of enrollment data is broken out by student demography. Also found within this section are enrollment trends from feeder high schools, student goals, income levels, native language spoken, enrollment status, ESL, citizenship, TANF, displaced homemaker, single parent, displaced worker and annual household income.

In the pages that follow are important enrollment data covering the past five years. While simple head counts tell one story, duplicated enrollment counts relate to the loads that students carry. Thus two headings for tables or figures are used: Unduplicated Count means that every student is tallied once regardless of their course loads. Course Enrollments factor in the student enrollments in all courses and are therefore duplicated counts. For example, if a student enrolls in 4 classes, the unduplicated count would be 1 while the duplicated course enrollments would be 4. Five-year trends on course enrollments will then show if students are taking more or less course loads.

Some of the graphics shown (tables and figures) give detailed enrollment numbers for fall, spring, and summer sessions. In other graphics, it made more sense to collapse these academic terms into one full academic year.

Huge enrollment gains were made during 1998 with the addition of the Sacramento Regional Public Safety Training Center (SRPSTC, an acronym no one can pronounce). In several instances enrollments in this special program are deleted from the upcoming figures and tables in order to capture the mainstream look of the college. To clarify matters, each section will be noted as including or not including SRPSTC.

Fall/Spring Course Enrollments by Term

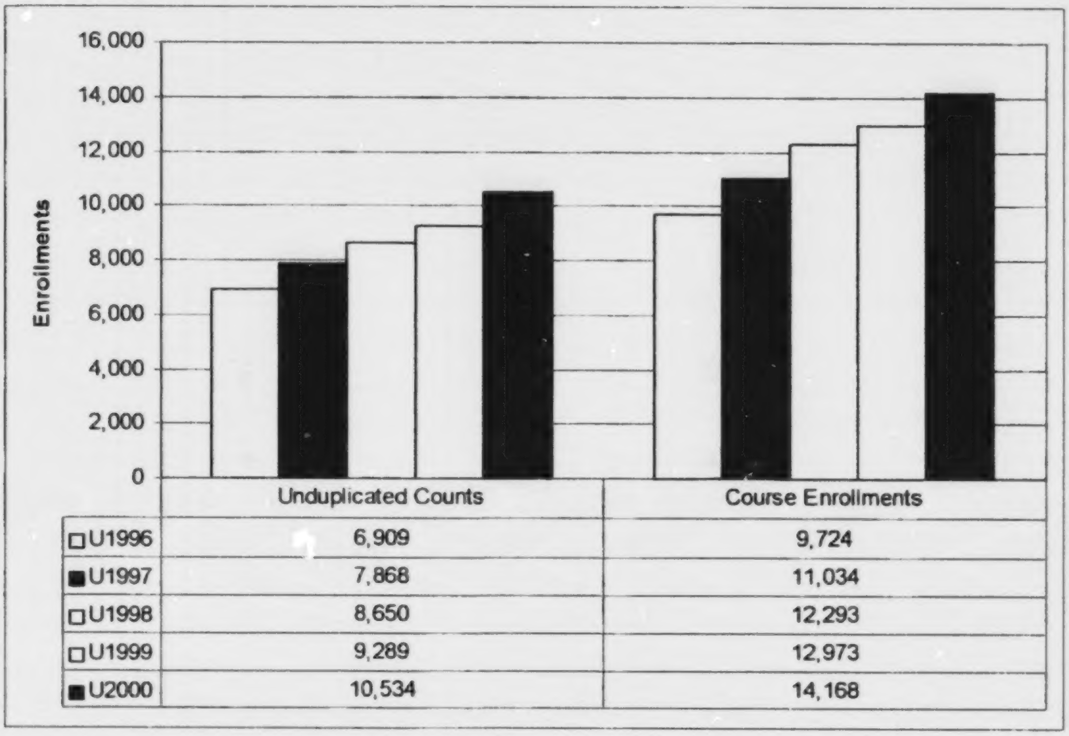


	Unduplicated Counts	Course Enrollments
☐F1996	21,205	57,248
■S1997	21,584	57,750
☐F1997	22,303	60,511
☐S1998	22,352	59,170
■F1998	27,165	66,660
☐S1999	27,790	68,725
■F1999	29,526	71,713
☐S2000	30,063	73,069
■F2000	29,201	72,251
☐S2001	27,784	70,641

Figure 1. Fall and Spring Enrollments (Unduplicated & Duplicated) for Five Academic Years (SRPSTC Included).

Comment: Both unduplicated student counts and course enrollments (duplicated counts) are shown for fall and spring terms over the past five years. Using fall 1996 as a base semester equal to 100%, unduplicated enrollments by spring 2001 increased to 131% of what the number was five years ago (i.e., a growth of 31%). Similarly, course enrollments have grown to 123% of the number five years ago. Dividing course enrollments by the corresponding unduplicated counts gives the average number of courses enrolled per student, 2.54. (Note that this average is not a unit load). If SRPSTC unduplicated enrollments for spring 2001 are deleted from total, there is still a net gain of 2,877 other students between fall 96 and spring 2001 (13.6%). The main conclusion to be drawn from the bar charts shown in Figure 1 is that ARC is experiencing a high enrollment phase that is further enhanced by the inclusion of SRPSTC.

Summer Enrollments by Term

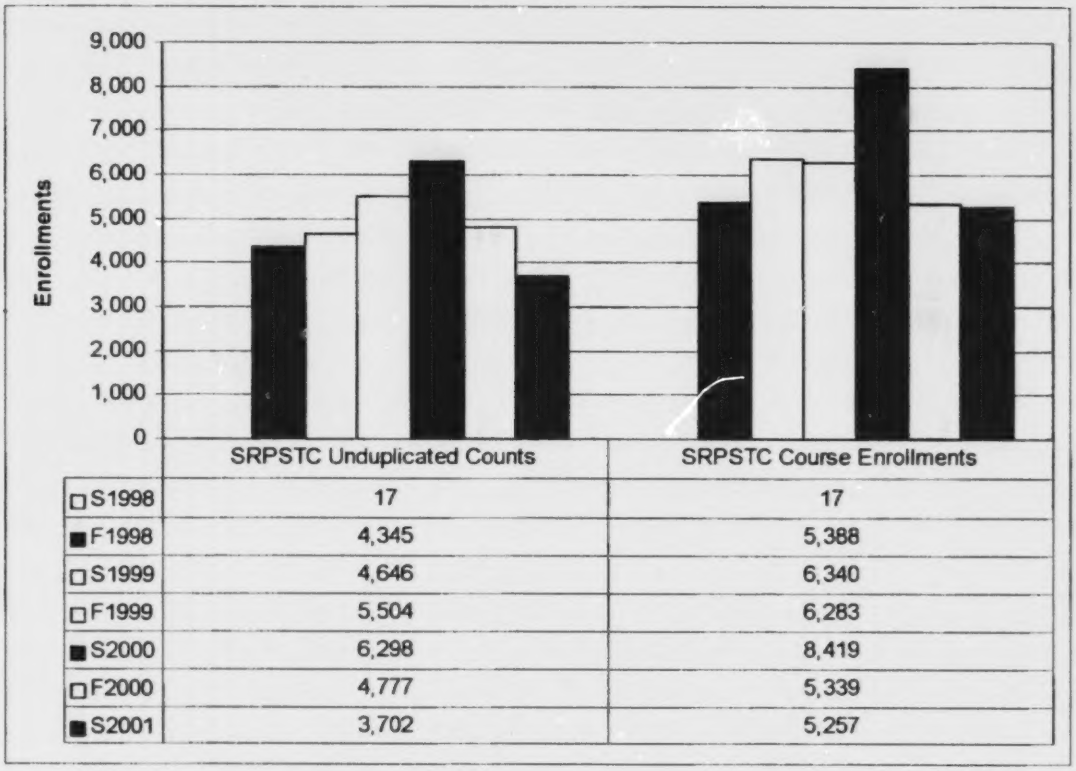


	Unduplicated Counts	Course Enrollments
□U1996	6,909	9,724
■U1997	7,868	11,034
□U1998	8,650	12,293
□U1999	9,289	12,973
■U2000	10,534	14,168

Figure 2. Summer Enrollments (Unduplicated and Duplicated) for Five Academic Years. (SRPSTC Included).

Comment: Summer sessions, which include 3, 6, and 8-week courses, show an even more dramatic increase over five years than the fall and spring terms. By the summer session of 2000 there was a growth of 52.5% (unduplicated counts) compared with summer of 1996. Removing the counts of SRPSTC from the summer 2000 total, the net growth is 18.9% for the same period. Figure 2 gives the appearance of steady incremental gains with each subsequent year. Adding all terms to form an academic year and then comparing the 1996-97 year to the 2000-01 year, the net change is an increase of 17,821 students or a 35.9% gain.

Sacramento Regional Public Safety Training Center Enrollments by Term (Summer, Fall, Spring)



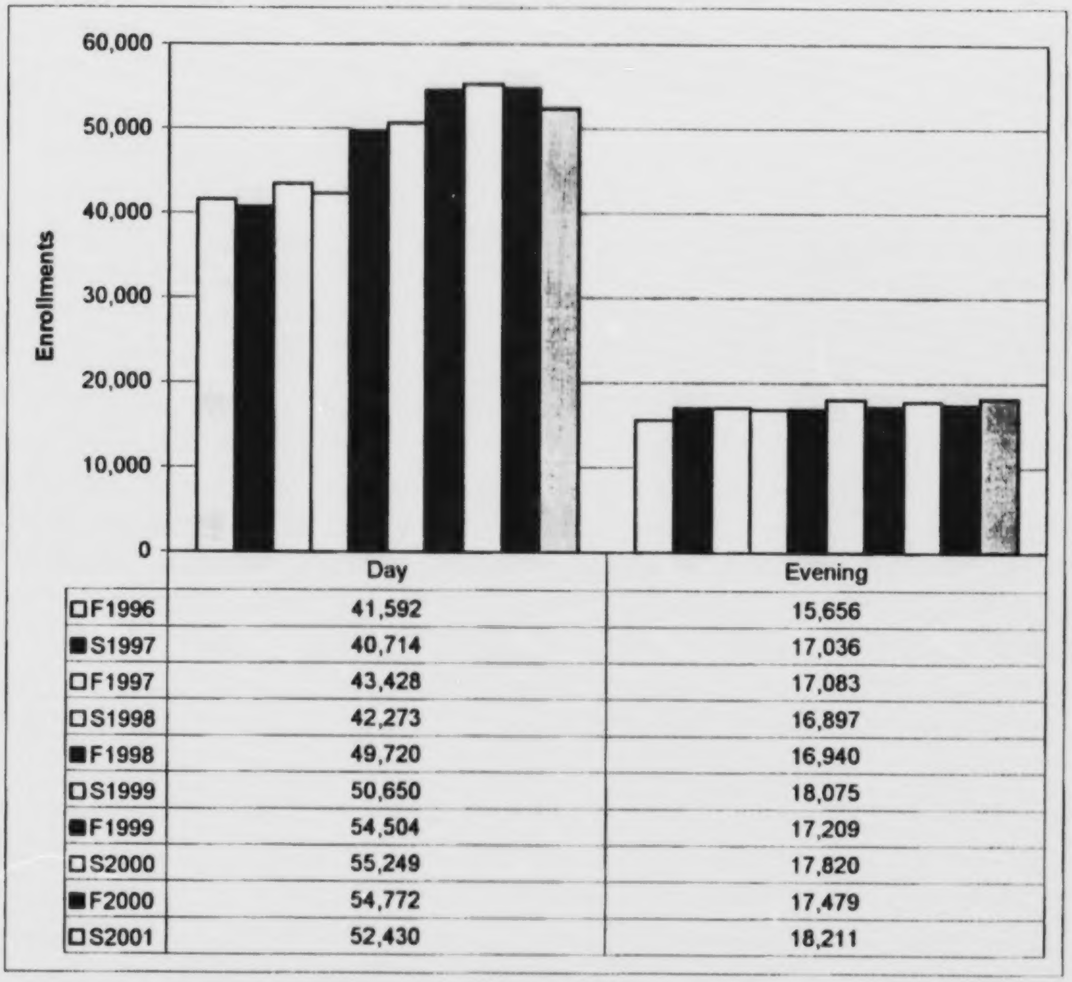
	SRPSTC Unduplicated Counts	SRPSTC Course Enrollments
□ S1998	17	17
■ F1998	4,345	5,388
□ S1999	4,646	6,340
□ F1999	5,504	6,283
■ S2000	6,298	8,419
□ F2000	4,777	5,339
■ S2001	3,702	5,257

Summer	U1998	U1999	U2000
SRPSTC Unduplicated Enrollments	585	1,570	2,321
SRPSTC Course Enrollments	640	1,755	2,501

Figure 3. Summer, Fall and Spring SRPSTC Enrollments (Unduplicated & Duplicated) for Five Academic Years.

__Comment__: As shown in Figure 3, the Sacramento Regional Public Safety Training Center had rapid growth until reaching a peak during spring 2000, then dropped 38% by spring 2001. Some of this drop may be attributed to recent reorganization efforts. During every term from fall 1998 on, the course enrollments for these students averaged slightly more than one class, 1.42. Summer Enrollments also show substantial growth through summer 2000.

Fall/Spring Day and Evening Course Enrollments by Term

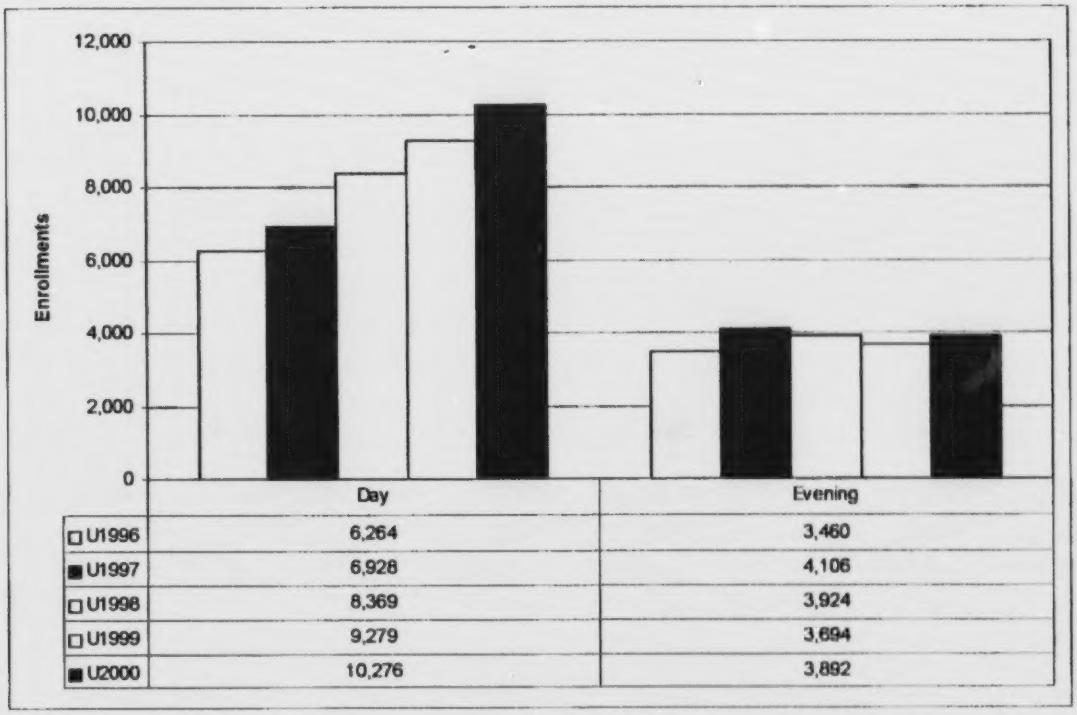


	Day	Evening
□F1996	41,592	15,656
■S1997	40,714	17,036
□F1997	43,428	17,083
□S1998	42,273	16,897
■F1998	49,720	16,940
□S1999	50,650	18,075
■F1999	54,504	17,209
□S2000	55,249	17,820
■F2000	54,772	17,479
□S2001	52,430	18,211

Figure 4. Day and Evening Duplicated Enrollments for Five Academic Years. (SRPSTC Included).

Comment: Enrollments for day classes (offered prior to 4:30 PM) witnessed an increase of 26.1% covering the past five years. During the period from fall 1996 to spring 2001, there was also a growth of 16.3% for evening students.

Summer Day and Evening Course Enrollments by Term

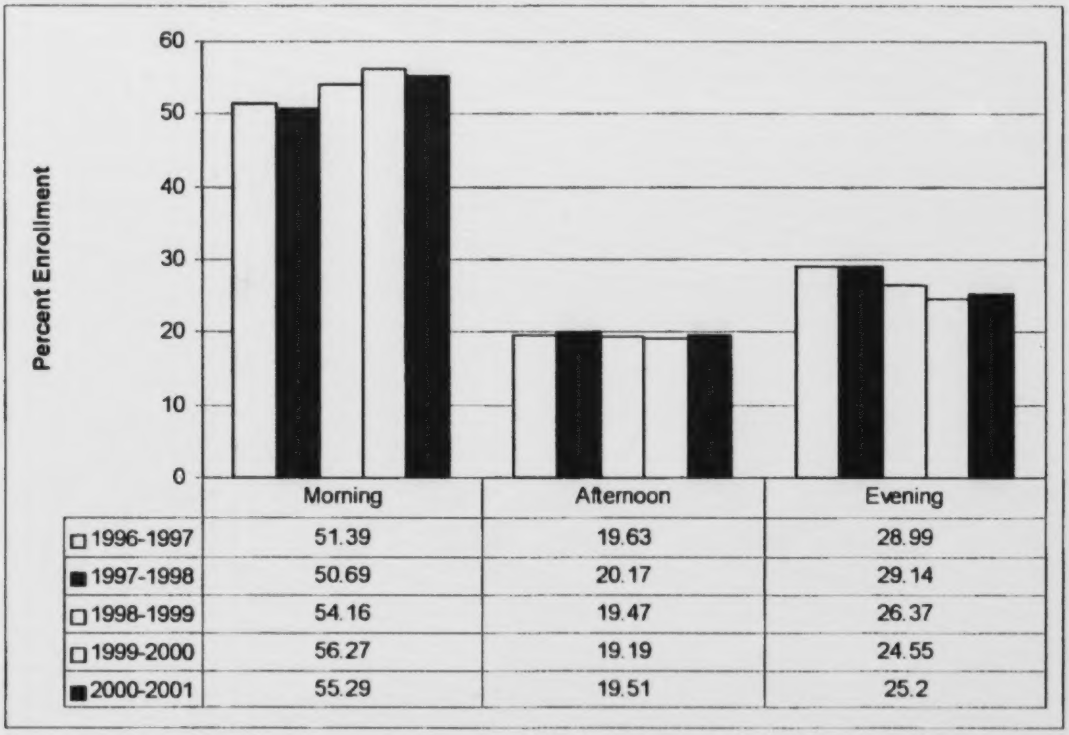


	Day	Evening
□ U1996	6,264	3,460
■ U1997	6,928	4,106
□ U1998	8,369	3,924
□ U1999	9,279	3,694
■ U2000	10,276	3,892

Figure 5. Summer Day and Evening Course Enrollments for Five Years (SRPSTC Included).

Comment: Summer day course enrollments (courses offered prior to 4:30 PM) continued an impressive upward trend of 64% covering five summer sessions. The evening course enrollments also increased by 12.5% during the same period of time.

Day, Afternoon and Evening Course Enrollment Distribution (%) by Academic Year

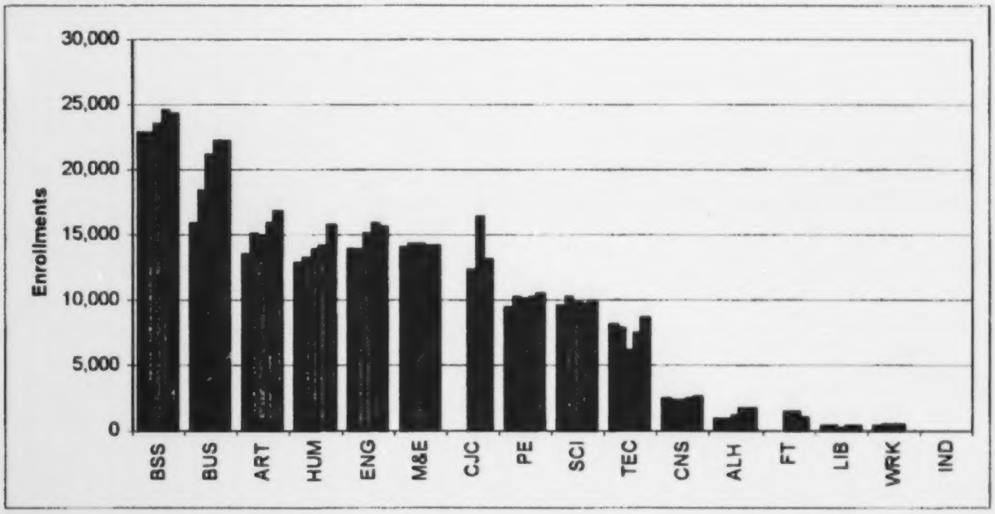


	Morning	Afternoon	Evening
□ 1996-1997	51.39	19.63	28.99
■ 1997-1998	50.69	20.17	29.14
□ 1998-1999	54.16	19.47	26.37
□ 1999-2000	56.27	19.19	24.55
■ 2000-2001	55.29	19.51	25.2

Figure 6. The Percentage Distribution of Morning, Afternoon, and Evening Course Enrollments for Each of Five Academic Years (SRPSTC Included).

Comment: Has ARC reached physical capacity with its present facilities? After examining Figure 6, the answer might be something like "Only at certain times of the day." Consider the full academic year 2000-2001. Although not shown, there were 86,841 course enrollments during the morning hours (55.29%), 30,627 course enrollments in the afternoon (19.51%), and 39,582 course enrollments during the evening (25.2%). Each yearly percentage total is 100. Another way of examining this issue is to say that afternoon enrollments represent 35% of day enrollments while the evening figure is 46% of day enrollments. Though the graph gives the appearance of low afternoon utilization, it may be that some courses that start before 12:00 AM (e.g., labs) may extend well into the afternoon. To accommodate an expanding student body, more sections will have to be added in the afternoons and evenings.

Course Enrollments for Area Across Five Academic Years



Enrollments	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
BSS – Behavioral/Social Science	22,940	22,947	23,557	24,641	24,360
BUS -Business	15,922	18,480	21,182	22,177	22,294
ART – Fine and Applied Arts	13,590	15,083	15,008	15,968	16,866
HUM - Humanities	12,927	13,243	13,889	14,209	15,765
ENG - English	13,896	13,933	15,179	15,877	15,610
M&E – Math Engineering & Design Tech	14,084	14,382	14,389	14,186	14,172
CJC – Sac Regional Public Safety Training Center	0	17	12,368	16,457	13,097
PE – Physical Education	9,415	10,245	10,138	10,243	10,501
SCI – Science	9,626	10,212	9,919	9,778	9,845
TEC – Technical/Education	8,125	7,909	6,231	7,512	8,683
CNS – Human Career Development	2,523	2,340	2,344	2,535	2,641
ALH – Allied Health	887	969	1,185	1,735	1,652
FT – Fire Technology	0	0	1,453	1,502	1,066
LIB – Library	342	429	289	415	458
WRK – Work Study	398	481	498	483	26
IND – Interdisciplinary Studies	47	45	49	37	24

Figure 7. Five-Year Course Enrollments for Academic Areas (SRPSTC Included).

Comment: In Figure 7 and within each academic area, there are five vertical bars showing the changes in course enrollments over the past five years. These "academic area bars" are also ordered by size showing the Behavioral/Social Science (BSS) area at the top left. However, the biggest growth since 1996-1997 occurred in Business, an increase of 40%.

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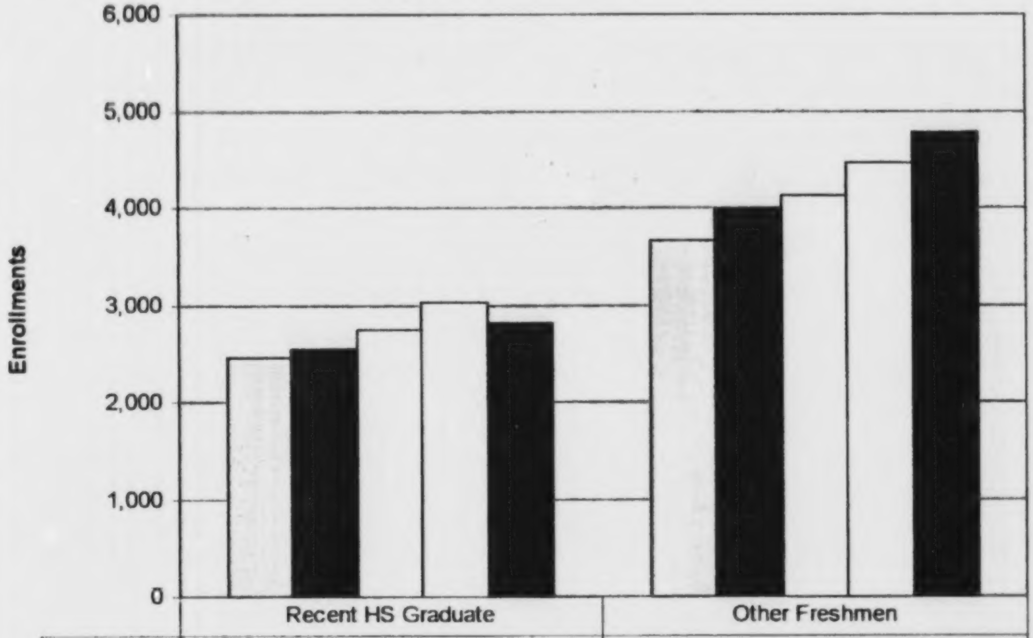
Unduplicated Counts for Freshmen Students by Academic Year

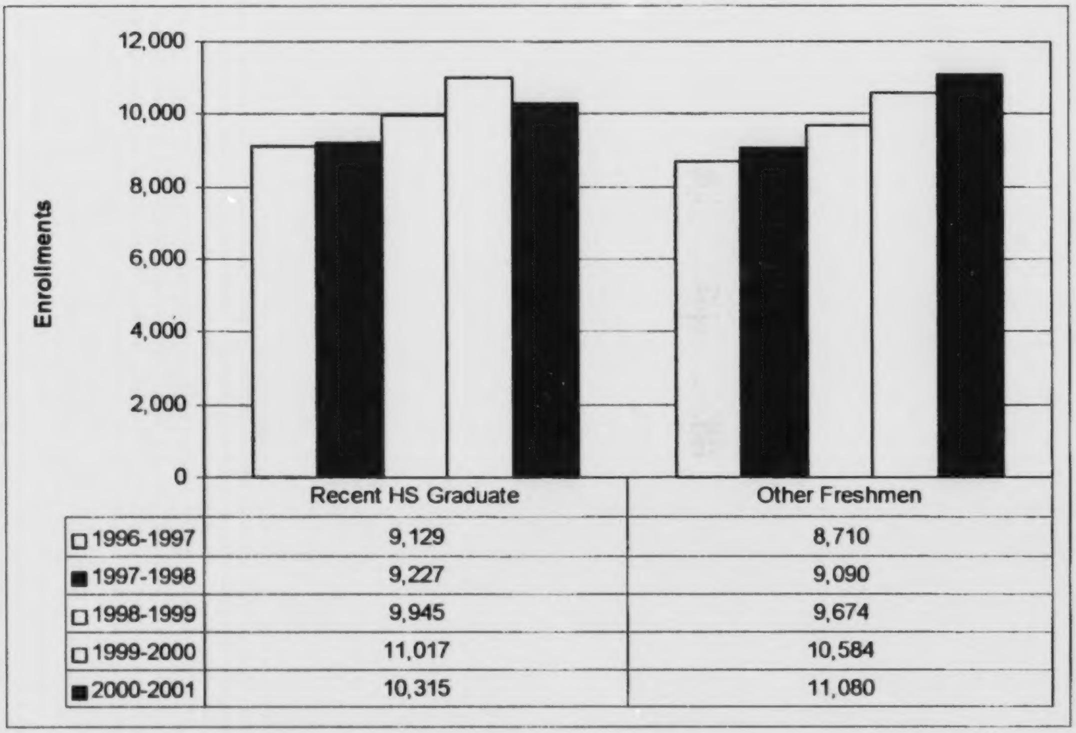


	Recent HS Graduate	Other Freshmen
☐ 1996-1997	2,468	3,669
■ 1997-1998	2,543	3,976
☐ 1998-1999	2,736	4,118
☐ 1999-2000	3,027	4,469
■ 2000-2001	2,821	4,786

Figure 8. Unduplicated Freshmen Counts for Five Academic Years (SRPSTC Not Included).

Comment: The cohort referred to as recent high school graduates is given the following definition: first-time freshman status, a high school graduate, an age of 19 or less, and no record of any college units earned upon entry at ARC. Conversely, the cohort named other freshmen still has the freshman status but fails to meet any one of the other conditions specified for recent high school graduates. So the cohort other freshmen is a residual group after removing all recent high school graduates. As shown in Figure 8, the other freshmen cohort is still a sizeable group. In five years, the recent high school graduate has shown a net gain of 353 students or a growth factor of 14.3%. The other freshmen cohort shows a net gain of 1,117 students that represents a gain of 30.4%. Should the recent high school graduate cohort continue to increase, one can project a subsequent increase in degrees and transfers in about three years.

Course Enrollments for Freshmen by Academic Year

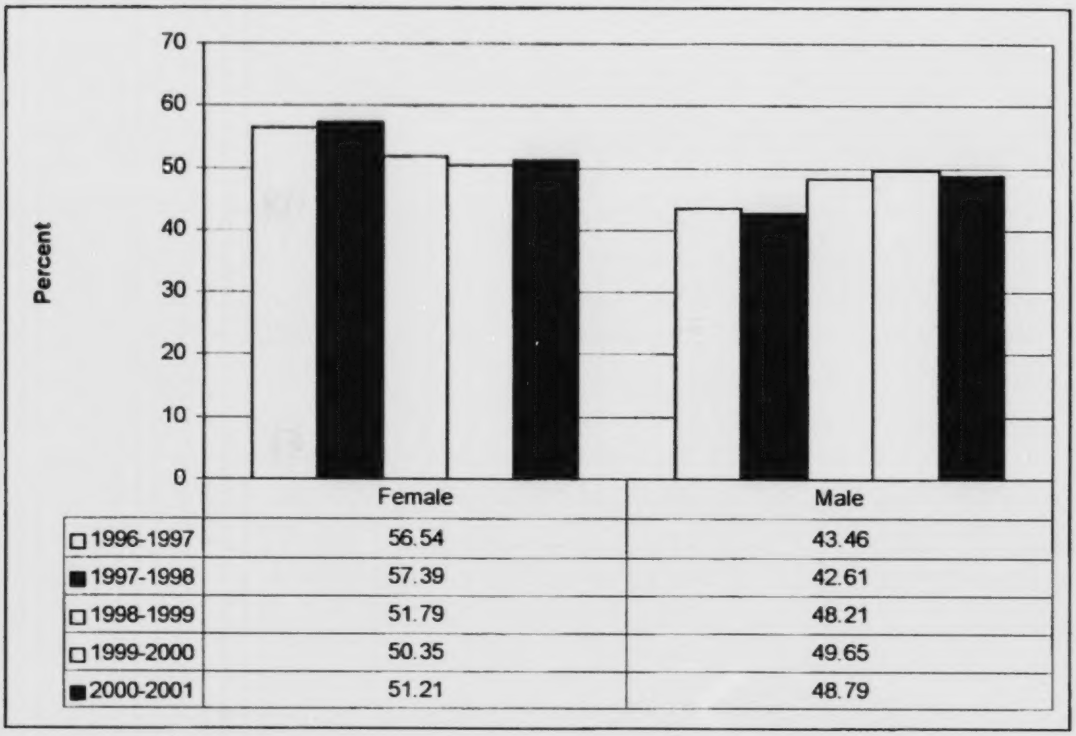


	Recent HS Graduate	Other Freshmen
☐ 1996-1997	9,129	8,710
■ 1997-1998	9,227	9,090
☐ 1998-1999	9,945	9,674
☐ 1999-2000	11,017	10,584
■ 2000-2001	10,315	11,080

Figure 9. Duplicated Enrollments of Freshmen for Five Academic Years (SRPSTC Not Included).

Comment: Freshmen course enrollments (duplicated counts) for both the recent high school graduates and other freshmen show a growth that is correlated with the basic head count. For example, the growth factor from 1996-97 to 2000-01 is 12.99% for recent high school graduates and 27.2% for other freshmen. This is reasonably close to the unduplicated growth percentages. As expected, recent high school graduates take more courses at ARC (3.7 average) than other freshmen (average 2.3). This rate has not changed appreciably during the 5-year period.

Percent Unduplicated Counts by Gender and by Academic Year

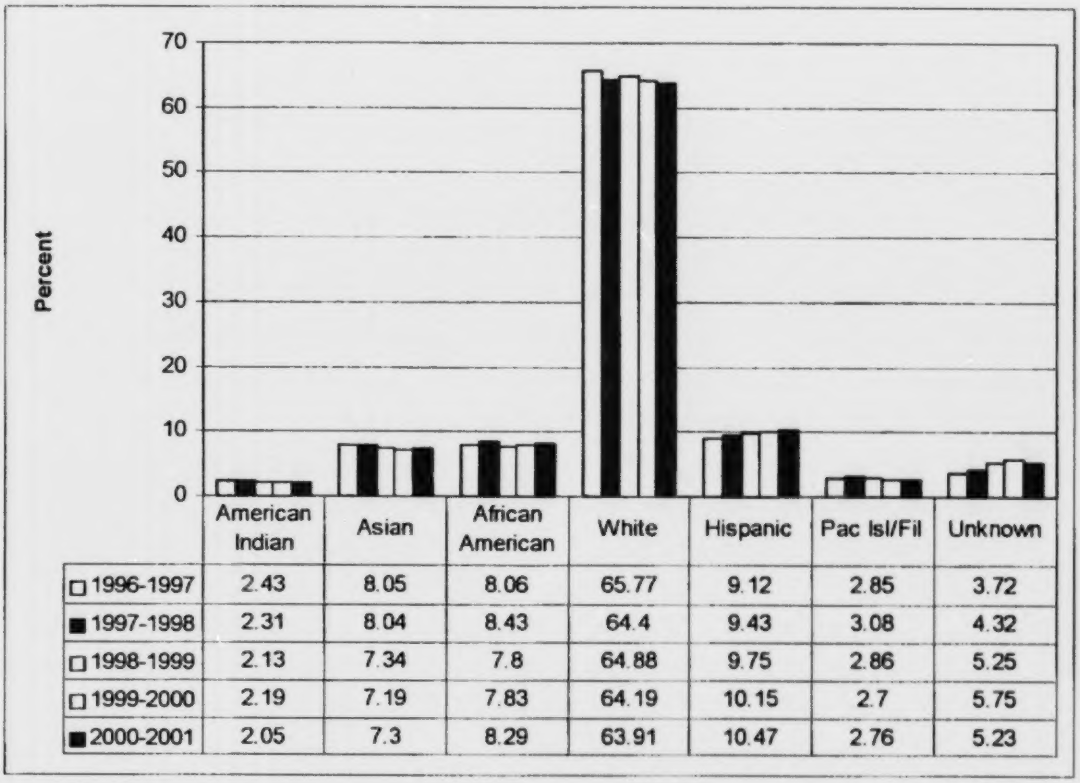


	Female	Male
□ 1996-1997	56.54	43.46
■ 1997-1998	57.39	42.61
□ 1998-1999	51.79	48.21
□ 1999-2000	50.35	49.65
■ 2000-2001	51.21	48.79

Figure 10. Percentages Based Upon Unduplicated Counts of Female and Male Students Over Five Years (SRPSTC Included).

__Comment__: Female students have typically outnumbered male students and this trend continues but the differences are shrinking during the past three years. For example, during 1999-2000, the percentage difference was less than 1%.

Percent Unduplicated Counts for Ethnicity by Academic Year



	American Indian	Asian	African American	White	Hispanic	Pac Isl/Fil	Unknown
□ 1996-1997	2.43	8.05	8.06	65.77	9.12	2.85	3.72
■ 1997-1998	2.31	8.04	8.43	64.4	9.43	3.08	4.32
□ 1998-1999	2.13	7.34	7.8	64.88	9.75	2.86	5.25
□ 1999-2000	2.19	7.19	7.83	64.19	10.15	2.7	5.75
■ 2000-2001	2.05	7.3	8.29	63.91	10.47	2.76	5.23

Figure 11. Percentages Based Upon Unduplicated Counts of Student Ethnic Groupings Over Five Years (SRPSTC Included).

Comment: The ethnic composition of students as categorized in Figure 11 has not changed dramatically in the last five years. The only continuous gain every year is with Hispanic students. An expanded ethnic breakout follows with Table 1.

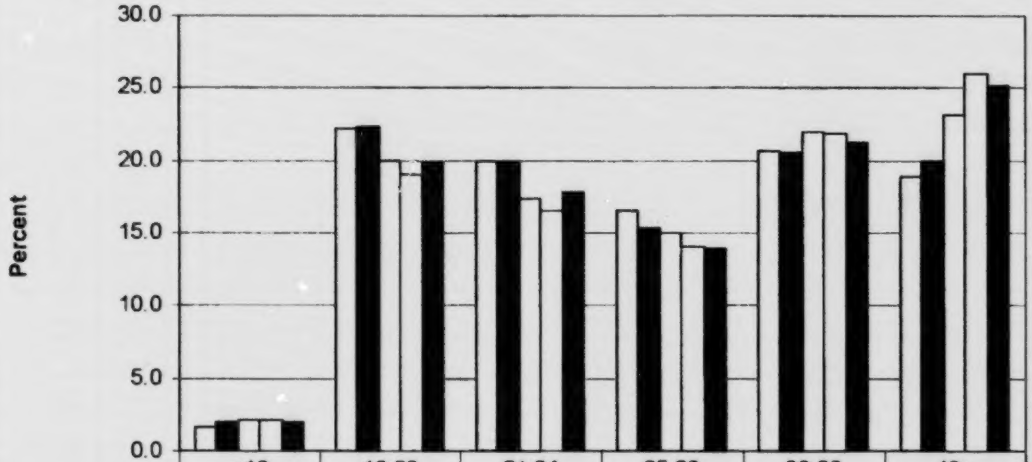
Unduplicated Counts for All Ethnic Categories by Academic Year

Table 1. Unduplicated Counts of Expanded Student Ethnic Categories Over Five Years (SRPSTC Included).

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Amer. Ind./Alaskan	1,207	1,212	1,354	1,505	1,382
Asian	40	29	25	21	75
Chinese	751	759	883	956	935
Asian Indian	334	438	518	614	627
Japanese	495	562	680	741	674
Korean	456	454	505	560	495
Laotian	178	197	255	270	251
Cambodian	30	22	47	47	55
Vietnamese	1,110	1,065	953	832	791
Other Asian	607	696	800	914	1,024
African American	4,006	4,429	4,962	5,391	5,594
White	32,684	33,824	41,264	44,215	43,151
Hispanic	92	64	52	53	44
Mex. Amer/Chicano/Lat	3,203	3,492	4,497	5,183	5,256
Puerto Rican	162	201	219	270	282
Central American	220	260	311	343	375
South American	234	264	316	317	308
Other Hispanic	623	670	808	823	806
Filipino	1,046	1,192	1,300	1,326	1,323
Pacific Islander	5	3	2	2	6
Guamanian	62	64	72	83	111
Hawaiian	92	115	143	125	126
Samoan	43	50	65	72	53
Other Pac. Islander	167	192	234	252	247
Other	1,851	2,269	3,340	3,963	3,528

Comment: As was noted earlier, ARC experienced a 35.9% increase in students from the 1996-97 academic year to the 2000-01 year. Some of the ethnic groups in Table 1 who exceeded that percentage increase during the same time period and who had an initial enrollment of at least 100 are: Asian Indian (+88%), Japanese (+36%), Laotian (+41%), Other Asian (+69%), African American (+40%), Mexican American (+64%), Puerto Rican (+74%), Central American (+70%), Other Pacific Islander (+48%), and Other (+91%). It should be noted that the large Russian/Ukrainian student population at ARC is likely to mark either "white" or "other" on their application. It is also our understanding that students who do not indicate their ethnicity are administratively marked "other."

Percent Unduplicated Counts for Age Group by Academic Year

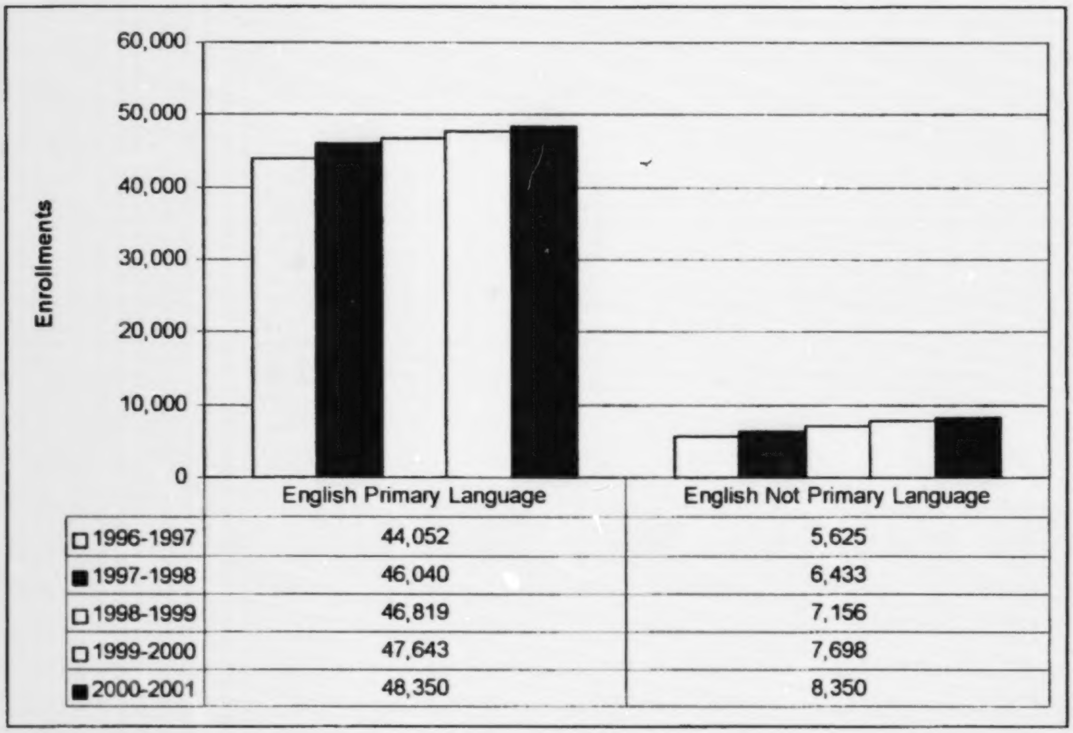


	<18	18-20	21-24	25-29	30-39	40+
☐ 1996-1997	1.7	22.2	20.0	16.5	20.7	19.0
■ 1997-1998	2.0	22.3	19.9	15.3	20.5	20.0
☐ 1998-1999	2.2	20.0	17.4	15.0	22.0	23.1
☐ 1999-2000	2.1	19.1	16.6	14.1	21.9	26.0
■ 2000-2001	2.0	19.8	17.9	13.9	21.3	25.2

Figure 12. Percentages Based Upon Unduplicated Counts of Student Age Groups Over Five Years (SRPSTC Included).

Comment: Because this is a percentage table, any increase must be offset by a corresponding decrease in order to equal a total of 100%. Over the past five years, the dropping percentages in the 18-20, 21-24, and 25-29 age groups are offset by the slight percentage increase in the 30-39 group and the large gain with the 40+ age groups. There is a definite correlation between increased student counts and increased ages.

Unduplicated Counts for ESL and non-ESL by Academic Year

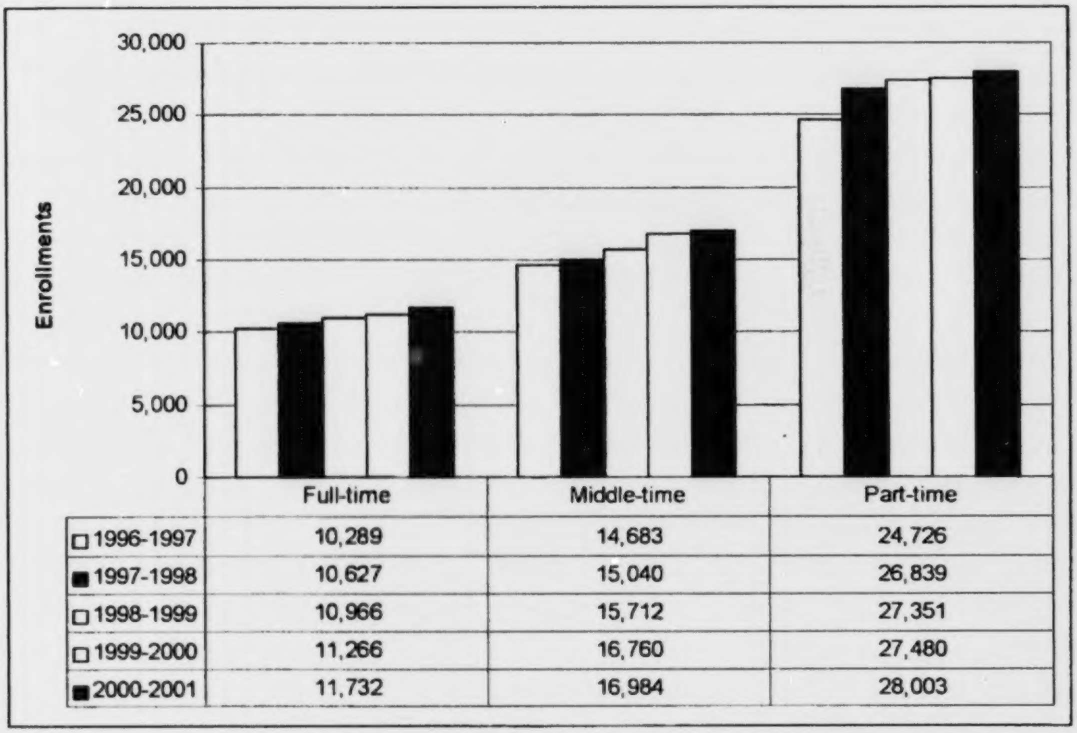


	English Primary Language	English Not Primary Language
☐ 1996-1997	44,052	5,625
■ 1997-1998	46,040	6,433
☐ 1998-1999	46,819	7,156
☐ 1999-2000	47,643	7,698
■ 2000-2001	48,350	8,350

Figure 13. Unduplicated Student Counts Based Upon Primary Use of English During Five Years (SRPSTC & Unknowns Not Included).

Comment: During 1996-1997, there were 5,625 ARC students who claimed that English was not their primary language. During the 2000-2001 academic year, the count increased to 8,350 students representing a gain of 48.4% by the end of five years. Later in this report will be an entire section on ESL students.

Unduplicated Counts by Academic Enrollment Status

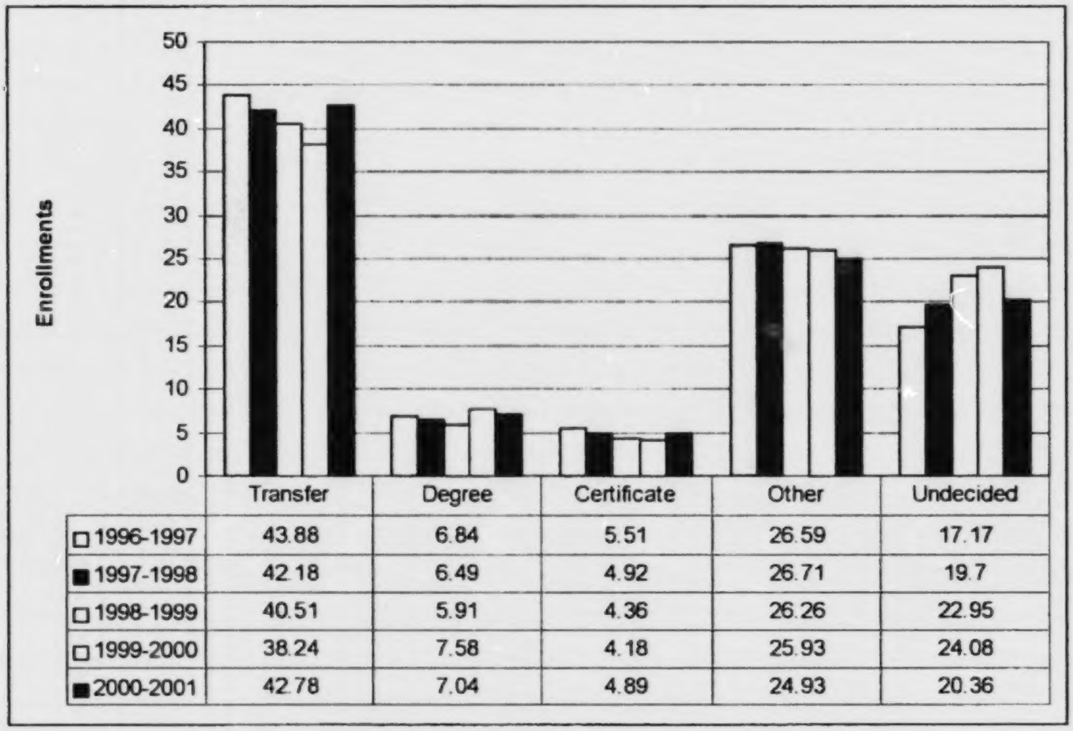


	Full-time	Middle-time	Part-time
□ 1996-1997	10,289	14,683	24,726
■ 1997-1998	10,627	15,040	26,839
□ 1998-1999	10,966	15,712	27,351
□ 1999-2000	11,266	16,760	27,480
■ 2000-2001	11,732	16,984	28,003

Figure 14. Unduplicated Counts of Students Categorized by End-of-Semester Load Status (SRPSTC Not Included).

Comment: Full-time is defined as 12+ units, middle-time as 6.0 – 11.5 and part-time as 0.5 – 5.5. Unduplicated counts of students by end-of-semester load status show that in the first year of the five (including summer sessions), the distribution was: full-time 20.7%, middle-time 29.5%, and part-time 49.8%. In the 2001-01 academic year the percentages were 20.7%, 29.9%, and 49.4%. This finding indicates that the distribution of unit loads has not really changed over the five years.

Informed Student Goal by Academic Year



	Transfer	Degree	Certificate	Other	Undecided
☐ 1996-1997	43.88	6.84	5.51	26.59	17.17
■ 1997-1998	42.18	6.49	4.92	26.71	19.7
☐ 1998-1999	40.51	5.91	4.36	26.26	22.95
☐ 1999-2000	38.24	7.58	4.18	25.93	24.08
■ 2000-2001	42.78	7.04	4.89	24.93	20.36

Figure 15. Percentages of Informed Student Goals for New Freshmen Over Past Five Years (SRPSTC Included).

Comment: An "informed goal" is usually obtained only after meeting with a counselor and filing an educational plan. The five-year trend in Figure 15 shows some ups and downs within each category, but the overall picture remains quite constant with the goal of transfer being selected most often. The reader should keep in mind that student educational goals identified at entry are essentially the same as "wishes." What is a more stable indicator of goals is not the box on the application that is checked off, but the course taking patterns. When that is examined, only about 25% take critical transfer courses, i.e., English 1A and transfer math. Finally, it is our understanding that many students are confused about what goal to select, e.g., transfer with an associate degree, or transfer without an associate degree.

Unduplicated Counts of Recent HS Graduates Who Subsequently Enrolled at American River College (Rank Ordered on Five-Year Total)

Table 2. Top 30 Feeder High Schools of Recent Graduates Who Enroll at ARC (SRPSTC Not Included).

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	Total
El Camino	179	169	153	224	168	**893**
Del Campo	154	193	183	197	163	**890**
Rio Americano	117	99	143	186	150	**695**
Mira Loma	147	146	102	160	103	**658**
Foothill	95	104	88	110	129	**526**
Cordova	94	86	96	101	98	**475**
Bella Vista	63	84	124	112	70	**453**
Highlands	83	75	78	88	75	**399**
Rio Linda	89	74	78	74	84	**399**
San Juan	88	84	76	82	53	**383**
Center	56	69	62	98	76	**361**
Casa Robles	79	68	66	73	64	**350**
Encina	60	50	73	69	51	**303**
Grant Union	59	62	71	56	41	**289**
Mesa Verde	33	47	55	57	38	**230**
Folsom	50	35	50	40	50	**225**
Oak Ridge	33	48	51	31	29	**192**
Davis	21	38	40	36	27	**162**
Roseville	65	35	33	17	7	**157**
Jesuit	30	35	44	24	21	**154**
Sacramento	22	35	28	31	28	**144**
Woodland	32	21	26	25	35	**139**
Johnson	31	23	22	36	24	**136**
Ponderosa	23	28	29	29	27	**136**
Johnson	26	34	19	16	30	**125**
River City	28	20	18	18	23	**107**
Christian Brothers	12	27	22	24	19	**104**
St Francis Girls	18	22	24	16	24	**104**
Woodcreek	0	0	2	33	69	**104**
Elk Grove	13	23	22	18	17	**93**
Total	**1,800**	**1,834**	**1,878**	**2,081**	**1,793**	**9,386**

Comment: The tabled listing of 30 feeder high schools shows the raw counts of recent high school graduates who subsequently enrolled at ARC. Compared with 1999-2000, the totals for the most recent year indicate a net decrease of 288 students which translates into a 13.8% loss. In previous years there has been an increase over the year before. As has been reported in a previous research report, these students are apt to be the ones most likely to transfer to a university. Thus as feeder high school counts decrease, so do eventual transfers decrease. One reason given for the decline in HS students is the increased recruiting efforts on high school campuses by UC and CSU representatives. No doubt ARC faces more competition in the business of increasing campus enrollments. The next table shows what percentage of a HS graduating class enrolled at ARC.

Percentages of Graduating High School Classes Who Subsequently Enrolled During Fall Semesters at ARC (Participation Rates)

Table 3. Percentages of HS Graduating Class Sizes That Enrolled at ARC Within the Year (Participation Rates).

	Fall 1996	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Trend
El Camino	39.9	38.1	40.6	48.1	35.3	-
Del Campo	32.3	34.4	35.6	38.9	35.5	-
Rio Americano	39.4	23.2	27.8	29.7	29.0	-
Mira Loma	30.2	33.9	27.6	37.2	32.3	-
Foothill	30.2	29.8	31.4	25.7	31.3	+
Cordova	26.0	21.7	21.0	22.5	21.3	-
Bella Vista	17.2	19.5	23.4	26.7	16.0	-
Highlands	23.3	28.0	24.6	29.7	18.9	-
Rio Linda	26.2	20.8	24.4	23.5	18.3	-
San Juan	28.8	25.8	24.7	29.7	18.5	-
Center	16.3	24.3	17.8	24.7	20.4	-
Casa Robles	17.2	17.6	11.3	15.9	13.7	-
Encina	40.7	23.1	36.8	40.2	26.3	-
Grant Union	17.6	15.6	16.7	14.1	10.0	-
Mesa Verde	12.6	19.1	17.6	22.4	16.5	-
Folsom	13.0	9.3	13.8	10.0	12.6	+
Oak Ridge	11.2	12.6	11.2	5.6	6.5	+
Davis	4.2	7.5	6.3	6.7	4.1	-
Roseville	12.8	9.5	14.6	8.6	3.6	-
Jesuit	10.1	8.6	13.9	8.3	7.3	-
Sacramento	6.2	9.4	6.3	6.3	6.0	-
Woodland	5.5	4.7	4.7	5.5	5.5	same
Hiram Johnson (2)	9.3	9.3	5.9	7.3	7.5	+
Ponderosa	6.1	6.7	6.3	5.6	5.6	same
Johnson	See	Hiram	Johnson			
River City	9.3	7.8	8.4	4.7	8.5	+
Christian Brothers	4.5	9.4	12.6	9.8	8.0	-
St Francis Girls	10.2	11.2	9.3	7.7	10.5	+
Woodcreek	n/a	n/a	n/a	7.7	16.2	+
Elk Grove	1.8	9.6	4.5	2.2	2.1	-

Comment: The last column in Table 3 is a + or – indicating what type of change there was from the previous year. A sign of + indicates an increase while a – indicates a decrease. There are more decreases than increases during the last year. As stated in the comments with Table 2, the losses may be related to increased recruitment efforts by CSU, UC, and other colleges. The phenomenon may also spell a need to redouble ARC recruitment efforts. Lastly, the high school graduating class sizes are reported from other sources that are assumed to be accurate.

Percent Unduplicated Counts for Citizenship by Academic Year

Table 4. Citizenship Percentages Based Upon Unduplicated Student Counts by Citizenship Status (SRPSTC Not Included).

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
U.S. Citizen	89.46	88.83	87.94	87.33	87.08
Permanent Resident	8.01	8.47	8.97	9.03	9.24
Temporary Resident	0.28	0.33	0.38	0.39	0.39
Asylee/Refugee	1.2	1.26	1.43	1.8	2.17
Student Visa	0.7	0.67	0.71	0.69	0.6

Comment: There is a slight 2% decrease in U.S. citizen status during five years offset by slight increases in permanent resident and asylum/refugee status.

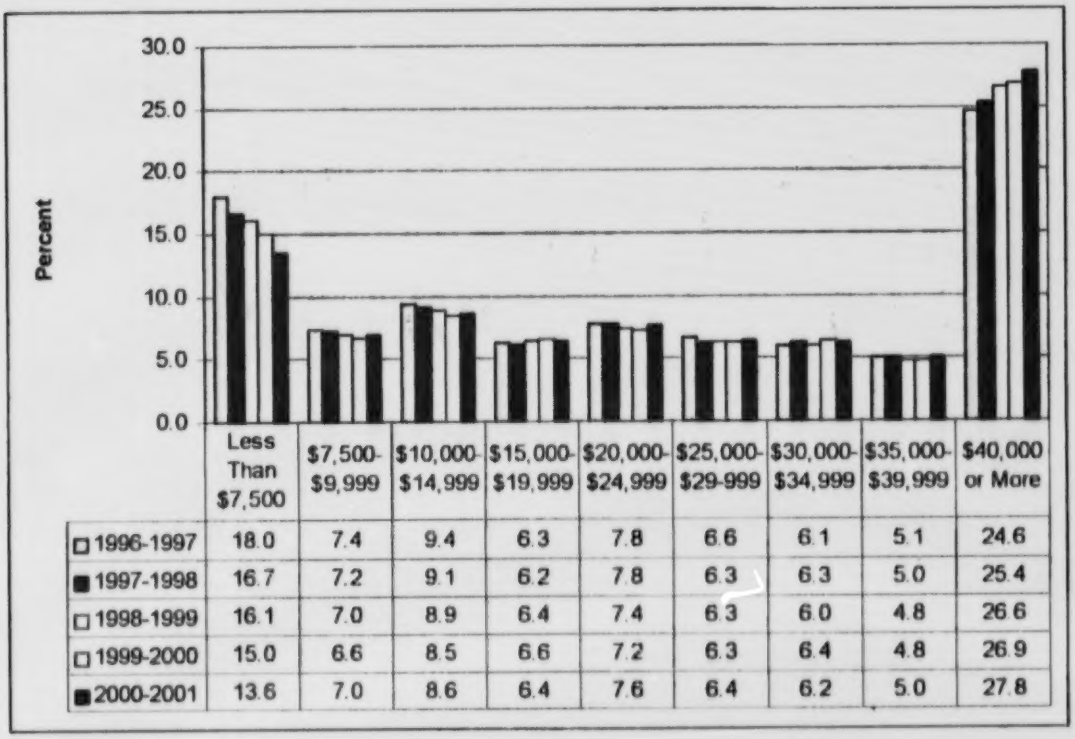
Percent Unduplicated Counts for TANF, Displaced Homemaker, Single Parent and Displaced Worker by Academic Year

Table 5. Federal Classification Percentages Based Upon Unduplicated Student Counts by Governmental Status (SRPSTC Not Included).

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
TANF	7.19	6.76	6.81	6.31	5.67
Not TANF	92.81	93.24	93.19	93.69	94.33
Displaced Homemaker	5.25	4.98	4.42	4.16	3.81
Not DH	94.75	95.02	95.58	95.84	96.19
Single Parent	9.31	9.33	9.17	8.97	8.72
Not SP	90.69	90.67	90.83	91.03	91.28
Displace Worker	6.03	5.35	4.65	4.87	4.65
Not DW	93.97	94.65	95.35	95.13	95.35

Comment: The various governmental categories listed in Table 5 (TANF, Displaced Homemaker, etc.) have decreased slightly over the past five years.

Percentages of Self-Reported Annual Household Income



	Less Than $7,500	$7,500-$9,999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000-$29-999	$30,000-$34,999	$35,000-$39,999	$40,000 or More
□ 1996-1997	18.0	7.4	9.4	6.3	7.8	6.6	6.1	5.1	24.6
■ 1997-1998	16.7	7.2	9.1	6.2	7.8	6.3	6.3	5.0	25.4
□ 1998-1999	16.1	7.0	8.9	6.4	7.4	6.3	6.0	4.8	26.6
□ 1999-2000	15.0	6.6	8.5	6.6	7.2	6.3	6.4	4.8	26.9
■ 2000-2001	13.6	7.0	8.6	6.4	7.6	6.4	6.2	5.0	27.8

Figure 16. Self-Reported Student Income Levels for Five Years (SRPSTC Not Included & Unknowns Not Reported).

__Comment__: Self-reported income may not be as accurately reported as one would want. Generally, incomes rise over time. The phenomena seen here is that there is a decrease in the lowest level of incomes (<$7,500), and a marked increase in the highest levels (>$40,000). Other income levels remain about the same over five years.

Summary of Access Section

- The college has experienced a phenomenal five-year period of growth – up 35.9% based upon an unduplicated student count. While student recruitment efforts still continue, the concern is not over whether ARC will have enough students, but how all the students will be accommodated.

- The distribution of course enrollments across three time periods (morning, afternoon, evening) suggests that if any room space is to be found, it will likely be during afternoon hours and evening hours.

- In examining enrollment growth in specific academic areas, there are some areas that have remained relatively stable over the past five years (e.g., math and engineering). Other areas have experienced tremendous increases (e.g., business).

- Recent high school graduates have contributed to the overall growth (14%) but not as much as "other freshmen" (30%). Older students (40+ years of age), showed large representative gains compared with all other age groups. This correlates with large increases in the number of part-time students.

- There is little doubt that the demographic and behavioral profiles of students keep changing which necessitates a rapid response plan on the part of the college.

Implications for Planning

1. Because forecasting enrollment changes is less than a perfect science, plans must be developed for all major contingencies. For example, what if enrollments were to suddenly increase or decrease by 5%, 10% or more?

2. Room utilization also calls for centralized planning given a specific surge or decline of enrollment. It may be an inconvenience, but rooms close to an academic area may have to be put at further distances to accommodate the total room needs of the campus.

3. Define what is to be a ceiling enrollment for the campus if given no further or limited funding, building or land acquisition.

Introduction to ARC Compass Assessment Test Performance

> ***This section gives some background on the validity of any assessment test used with student placement along with detailed findings about specific test outcomes. Of critical importance is to what extent the Compass tests provide information about the probable success in a given course. A more detailed report is: Barr, J., Rasor, R., & Grill, C. (January 2002). The Evaluation of Present Course Placement Procedures Using the Compass Tests, American River College.***

This section deals with one aspect of institutional effectiveness, how well ARC's computerized placement tests (Compass) assist individuals in reaching informed decisions about enrolling in selected courses, namely English composition, reading, and mathematics. The more detailed report on ARC test assessment includes much more than what is covered here including analysis of testing and ESL courses.

The bottom line question in assessment is: Do Compass scores add any relevant information in the decision-making process surrounding course placement? If so, to what degree? The research to answer these questions is a matter of validity. Of critical concern is the interpretation of evidence purporting to show the degree of validity. Validity in this case is the defensibility of the inferences made on the basis of test scores and other measures with respect to student performance in English, reading, mathematics, and ESL. In other words, it is the accuracy of total judgments leading to a decision of course entry.

The wording "test validity," while commonly used throughout educational circles, is really an inappropriate term. Rather, ***it is the decisions made about test outcomes that must be validated.*** There are several such sources of validity evidence. The main sources used in educational settings are briefly described below:

1) Evidence based on test content. Often this is the judgment of professionals in the field who can examine in detail the congruency between the test items and the content of a course. A test score would enable one to determine the amount of knowledge that a student has about the subject matter before taking such a course. Given this objective, it would seem logical that scores only be used to skip a target course and proceed to the next level. Students who start a course of study are not supposed to already know very much about the learning tasks awaiting them. If they do, then they should go to the next level course. What is necessary information is how well students perform on the entrance standards of a course - not upon the content of the course.

2) Evidence based upon association with some future external criterion. This evidence most often measures the degree of correlation between assessment test scores and future criterion measures like final grades in a course or scores on a comprehensive final exam within a course. The critical question is how well assessment scores predict another external measure.

3) Evidence based on consequences of testing. This type of evidence usually speaks to the benefit gained by use of a testing system. For example, it would be beneficial if such testing were to result in higher student course performance through differential screening of individuals who lack the prerequisite skill to enter a course. In this instance, one must show evidence that such a benefit actually occurs.

In the California community college system, there is often much talk over what is called "Consequential Validity." This is often measured early in a semester by the percentage of students judging that they were correctly placed in a course with respect to the skills demanded of them to complete that course successfully. In addition, the instructor of the course also evaluates each student with respect to the same standard, that is, the student either was or was not properly placed. Although this type of validity evidence is used in several community colleges including ARC, and is thought by some to be a legally defensible position in terms of using tests, it seems to us that it misses the mark when it comes to what is intended by the consequences of testing. Consequences appropriate here would be improved student performance, possibly improved teaching, and decreased student dropouts. Consequential validity is much more than the simple notion that an instructor and the students in a course believe proper placement has occurred.

4) Evidence based on convergent data. Relationships between test scores and other measures intended to assess similar constructs provide convergent evidence. For example, scores on a multiple-choice test that measure correct grammatical usage of English may be compared with evaluations of correct usage within written essays. Experimental designs may also be used to determine if test scores change as a function of receiving instruction in a course. The point here is that more than one approach is used to determine validity.

5) Evidence based on professional judgment. It is a legal requirement in California's community colleges that no decision to allow or disallow enrollment in a particular course of study be based upon a sole measure coming from a test. Rather, other measures must be applied (multiple measures) which can either support or not support the interpretation coming from a test score. The intent here is to look at several sources of data by which to make an informed decision about enrollment in a course. However, it is not enough to simply apply the multiple measures in reaching a consensus decision, but to also evaluate the evidence as to whether the other measures are relevant to making a correct decision. The totality of data must be examined for its accuracy. It is suggested that a portfolio of validity evidence be available for each test used in the context of course placement.

Listed in this report are the cutoff scores, normative data about each test, and evidence of validity for the tests used in conjunction with course placement in English composition, reading, and mathematics. It is our understanding that each test has previously been reviewed by faculty for content validity, that is, test items adequately sample knowledge of the same constructs found within the course of study. Yet there is little rationale why students should be expected to know the material covered in a course when they have not yet enrolled. (See comments under #1 above). We also assume that professional personnel in every case have applied multiple measures - even though those multiple measures have not been evaluated for their appropriateness or consistency of application.

The evidence of validity used within this report compares test scores above and below the cut score against subsequent course success which is defined as the percentage of final grades that are A, B, C, and Credit relative to all final grade notations. As such, the evidence shown is criterion related and predictive validity. We also briefly examined the outcomes should a particular cut score be raised a few points. None of the conclusions changed because of such a shift. In addition, we cannot determine just what set of multiple measures were applied nor whether they improved or made worse the prediction of course success from knowledge of test score. Thus the correlation values between scores and grades that will be reported are not based upon scores alone but upon scores plus some set of other measures that counselors used to help with the decision making process regarding course entry.

As the reader may know, the value of correlation coefficients (r) range from –1.00 through .00 to +1.00. Negatives or near zero correlations between scores and grades are usually not what a researcher wants to find. In student assessment, researchers would like to see high positive correlation values between test scores and grades, a value of at least .40 indicating that higher scores tend to be associated with higher grades. Likewise, lower scores tend to be associated with lower grades. If a correlation value is very low or zero, the two measures are unrelated in any mathematical sense and one cannot predict the other.

When someone views a correlation value and alongside to the right sees one of the following ($p < .05$) ($p < .01$) ($p < .001$) or (ns), it refers to the probability that the obtained sample correlation came from a population of values with a true correlation value of zero (.00). Therefore, $p < .05$ means that one is about 95% confident (and 5% unsure) that the population correlation is not .00. When you see $p < .01$, it means that one is about 99% confident (and 1% unsure) that the population correlation is not .00. When you see $p < .001$, it means that one is about 99.9% sure that the population correlation is not .00. Finally, when you see (ns), it indicates that one believes the obtained correlation value is likely to be nothing but random variation from a population with a true correlation value of .00. The (ns) stands for "not statistically significant" – in other words, not different from .00. The important thing to remember is that levels of statistical significance (.05, .01, .001) only tell us how confident we are that the resulting sample correlation is truly different from a population correlation of zero. It does not indicate that the correlation is useful. What counts in terms of usefulness is the magnitude of the correlation – not its significance level.

Collapsing Grade Cells: In the analyses that follow, the grade notations of A, B, C or CR are collapsed into one category called success and given a numerical weight of "2." Likewise, grade notations of D, F, NC, or WT (withdrew after census) are collapsed into one unsuccessful category and weighted as a "1" for numerical purposes. Weighing all grades in this way has proven very useful in terms of maintaining sample sizes and is used extensively across the state. For an even more detailed analysis of Compass scores and all grades, consult the parallel report, The Evaluation of Present Course Placement Procedures Using the Compass Tests, ARC, January 2002.

English Placement Test (Compass) for English 1A, 58, 256

English Writing Cut Scores

English Writing Placement	Writing Test Score
English 256	1 to 48
English 58	49 to 80
English 1A	81 to 98
English 1A Honors	99 to 100

ARC Normative Data

Sample size = 12,940 (all test records)
Maximum possible score = 100

Mean = 60.34
Standard Deviation = 29.30
Median = 65.00
Obtained Range = 1 to 99
Middle 50% Range = 35 to 87
Skewness = -.48 negative skew

Percentiles: 10th = 16, 20th = 28;
30th = 42; 40th = 55; 50th = 65;
60th = 74; 70th = 82; 80th = 90;
90th = 96

The data above are based upon the computerized Compass test, English scale. The data were generated by all students who took the test at American River College (or its satellites) irrespective of whether or not such students eventually enrolled in an ARC English course. The essential statistics for establishing local norms include the sample size, the mean and median, and the various percentile ranks. The mean (arithmetic average) is about 5 points lower than the median (middle point in a ranked distribution). This difference indicates that a collection of low scores "pulled down" the value of the mean whereas the median would be unaffected. This conclusion is also borne out by the degree of negative skewness, that is, the resulting histogram (curve) has more of a trail of very low scores than high scores. Very low scores are not too surprising in view of the fact that some students with a marginal ability to read English take the English scale only to stop after attempting a few items. However, we tried to eliminate all low scores that were a result of not proceeding correctly with a computer.

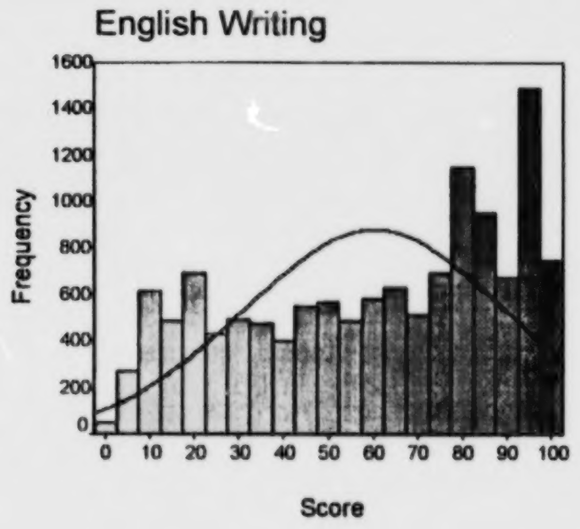


Figure 17. All Compass English Writing Assessment Scores

English 1A Analysis

Conditions for analysis: No evidence of enrolling in English 256 or 58 prior to 1A, test date prior to or beginning of English 1A, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 81 (68th percentile)	Total number of students this analysis: 1,175 (100%) Number of students below cut = 213 (18.1%) Number of students at/above cut = 962 (81.9%)

English 1A Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 63.40%	(b) 58.50%
Course Non-Success	(c) 36.60%	(d) 41.50%
Totals	100.00%	100.00%

English 1A Four-Cell Analysis
Overall Course Success Rate = 59.4%
Four-Cell Test Predictive Accuracy = 54.6% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) and Cut Score Break (1,2) = -.038 (ns)

Comment on English 1A: When controlling for students' English course-taking history, the Compass English Test would seem to be a very weak instrument in terms of predicting success in English 1A (correlation = -.038). The success rate for students falling below the cut score is higher than for students falling above the cut score. This results in a negative correlation. Even applying statistical manipulations to correct for such things as restricted range, grading variability, and deleting all data on students who withdrew, do not improve matters. Other correlation values based upon more detailed analysis can be found in Table 6 within this report. Those results also support the conclusion that the Compass test falls short in terms of what is acceptable for continued use of this test to place students into English 1A.

English 58 Analysis

Conditions for analysis: No evidence of enrolling in English 256 or 1A prior to 58, test date prior to or beginning of English 58, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 49 (36th percentile)	Total Number of students this analysis: 823 (100%) Number of students below cut = 188 (22.8%) Number of students at/above cut = 635 (77.2%)

English 58 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 43.60%	(b) 47.70%
Course Non-Success	(c) 56.40%	(d) 52.30%
Totals	100.00%	100.00%

English 58 Four-Cell Analysis
Overall Course Success Rate = 46.8%
Four-Cell Test Predictive Accuracy Rate = 49.7% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) and Cut Score Break (1,2) = .034 (ns)

Comment on English 58: When controlling for students' English course-taking history, the Compass English Test would seem to be a weak instrument in terms of predicting success in English 58 (correlation = .034). Applying statistical manipulations to correct for such things as restricted range, grading variability, and deleting all data on students who withdrew, did not improve the results to any great extent (see Table 6 in this report). All correlation values are below what is acceptable for continued use of this test to place students into English 58.

English 256 Analysis

Condition for analysis: No evidence of enrolling in English 58 or 1A prior to 256, test date prior to or beginning of English 256, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Former Cut Score = 16 (11th percentile)	Total Number of students this analysis: 419 (100%) Number of students below cut = 77 (18.4%) Number of students at/above cut = 342 (81.6%)

English 256 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 46.80%	(b) 57.90%
Course Non-Success	(c) 53.20%	(d) 42.10%
Totals	100.00%	100.00%

English 256 Four-Cell Analysis
Overall Course Success Rate = 55.8%
Four-Cell Test Predictive Accuracy Rate = 57.0% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) and Cut Score Break (1,2) = .087 (ns)

Comment on English 256: When applying controls for students' English course-taking history, the Compass English Test is a weak instrument in terms of predicting success in English 256 (correlation = .087). The application of statistical manipulations to correct for such things as restricted range, grading variability, and deleting all data on students who withdrew, did not improve the basic results (see Table 6 in this report). All correlation values are below what is acceptable for continued use of this test to place students into English 256.

Reading Placement Test (Compass) for English 4, 5, 71 (now 78), & 268/270

English Reading Cut Scores

English Reading Placement	Reading Test Score
English 268 or 270	1 to 70
English 71 (78)	71 to 84
English 4 or 5	85 to 100

ARC Normative Data

Sample size = 13,304 (all test records)

Mean = 78.81
Standard Deviation = 16.47
Median = 83
Absolute Range = 19 to 99
Middle 50% Range = 70 to 92
Skewness = -.76 high negative skew

Percentiles: 10th = 56; 20th = 65;
30th = 73; 40th = 78; 50th = 83;
60th = 87; 70th = 90; 80th = 93; 90th = 96

The data above are based upon the computerized Compass test, the scale for reading. The data were generated by all students who took the test at American River College (or its satellites) irrespective of whether or not such students eventually enrolled in an ARC reading course. The essential statistics for establishing local norms include the sample size, the mean and median, and the various percentile ranks. These scores also show considerable negative skewness, that is, the resulting histogram (curve) has more of a trail of very low scores than high scores. In discussions with the Compass testing research division, we found that they also found a negatively skewed curve when compiling data for community colleges across the nation.

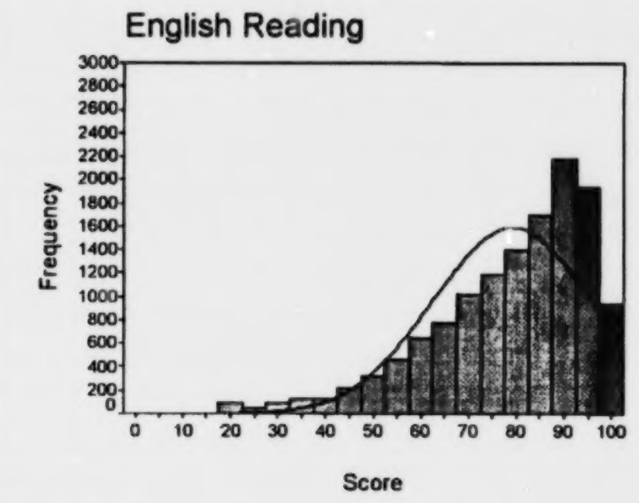


Figure 18. All Compass Reading Assessment Scores

English 4/5 Analysis

Conditions for analysis: No evidence of enrolling in English 268/270 or 71 prior to 4/5, test date prior to or beginning of English 4/5, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Former cut score = 85 (57th percentile)	Total number of students this analysis: 72 (100%) Number of students below cut = 16 (22.2%) Number of students at/above cut = 56 (77.8%)

English 4/5 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 62.50%	(b) 37.50%
Course Non-Success	(c) 37.50%	(d) 62.50%
Totals	100.00%	100.00%

English 4/5 Four-Cell Analysis
Overall Course Success Rate = 43.1%
Four-Cell Test Prediction Accuracy = 37.5% (b + c cell frequencies relative to total sample size
Correlation Between Success (1,2) and Cut Score Break (1,2) = -.210 (ns)
Caution: Sample size relatively small for definitive interpretation. Consider only as trend.

Comment on English 4/5: The sample size is small (n=72) which adds a precautionary note to any definitive conclusions. However, all existing correlations are negative which means that students who scored relatively low on the assessment test experienced higher course success than students scoring relatively high (correlation =-.210. Also see Table 6 in this report). Should this trend continue with larger sample sizes, the Compass test could not be recommended for use with placement into English 4/5.

English 71 Analysis

Note: Course number has now been changed to 78

Conditions for analysis: No evidence of enrolling in English 268/270 prior to 71, test date prior to or beginning of English 71, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 71 (28th percentile)	Total number of students this analysis: 266 (100%) Number of students below cut = 26 (9.8%) Number of students at/above cut = 240 (90.2%)

English 71 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 61.50%	(b) 47.90%
Course Non-Success	(c) 38.50%	(d) 52.10%
Totals	100.00%	100.00%

English 71 Four-Cell Analysis
Overall Course Success Rate = 49.2%
Four-Cell Test Prediction Accuracy = 47.0% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) and Cut Score Break (1,2) = -.081 (ns)

Comment on English 71 (now 78): There were only 26 students in this analysis who had a score below the cut point. This puts a limit on what can be said about the appropriateness of the cut score. The value is -.081. However, the correlation between all grades and all scores (cut score not a factor) is not only low but in the wrong direction. (See Table 6 in this report). This negative correlation indicates that there is a tendency for lower scoring students to earn higher grades, while higher scoring students earn lower grades. This outcome suggests that the Compass test should not be used with placement into English 71(78).

English 268/270 Analysis

Conditions for analysis: No evidence of enrolling in English 71 prior to 268/270, test date prior to or beginning of English 268/270, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Former Cut Score = 53 (8th percentile)	Total number of students this analysis: 461 (100%) Number of students below cut = 108 (23.4%) Number of students at/above cut = 353 (76.6%)

English 268/270 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 36.10%	(b) 49.30%
Course Non-Success	(c) 63.90%	(d) 50.70%
Totals	100.00%	100.00%

English 268/270 Four-Cell Analysis
Overall Course Success Rate = 46.2%
Four-Cell Test Prediction Accuracy = 52.7% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) and Cut Score Break (1,2) = .112 (p<.05)

Comment on English 268/270: All of the correlations between scores and success or grades are in the positive direction, significantly different from zero, but still very low, (correlation = .112. Also see Table 6 in this report). For this reason, the Compass test is not recommended for use with placement into English 268/270.

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Math Placement Test (Compass) for Math 51, 53, 15

There are five math test levels within the Compass instrument. Cut scores established for entry into a particular math course are based upon one of two scales, e.g., a relative high score on a lower level math test, or a relatively low score on a next higher test.

Math Cut Scores

Math Placement	Math Test & Score
Math 51 (Algebra 1)	Math 1: 48 to 100
Math 51 (Algebra 1)	Math 2: 26 to 40
Math 53 (Algebra 2)	Math 2: 41 to 64
Math 53 (Algebra 2)	Math 3: 31 to 49
Math 15 (Trig.)	Math 4: 52 to 100
Math 15 (Trig.)	Math 5: 31 to 40

ARC Normative Data for Math Placement (Compass)

Math 1 Compass Test

Sample size = 8,206 (all test records)
Mean = 35.15
Standard Deviation = 14.91

Median = 33
Absolute Range = 17 to 99
Middle 50% Range = 24 to 41
Skewness = .433

Percentiles: 10th = 20; 20th =23;
30th = 26; 40th = 29; 50th = 33;
60th = 36; 70th = 39; 80th = 44;
90th = 52

Math 2 Compass Test

Sample size = 3,136 (all test records)
Mean = 40.39
Standard Deviation = 12.83

Median = 38
Absolute Range = 15 to 96
Middle 50% Range = 30 to 50
Skewness = .559

Percentiles: 10th = 26; 20th = 29;
30th = 31; 40th = 34; 50th = 38;
60th = 42; 70th = 47; 80th = 53;
90th = 59

Math 3 Compass Test

Sample size = 310 (all test records)
Mean = 42.08
Standard Deviation = 7.62

Median = 42
Absolute Range = 25 to 92
Middle 50% Range = 36 to 47
Skewness = .031

Percentiles: 10th = 33; 20th = 35;
30th = 38; 40th = 40; 50th = 42;
60th = 44; 70th = 46; 80th = 47;
90th = 49

Math 4 Compass Test

Sample size = 282 (all test records)
Mean = 67.16
Standard Deviation = 17.23

Median = 68
Absolute Range = 31 to 99
Middle 50% Range = 53 to 81
Skewness = -.146

Percentiles: 10th = 43; 20th = 50;
30th = 56; 40th = 64; 50th = 68;
60th = 72; 70th = 78; 80th = 84;
90th = 91

ARC Normative Data for Math Placement (Compass) (continued)

Math 5 Compass Test

Sample size = 817 (all test records)
Mean = 54.59
Standard Deviation = 15.13

Median = 52
Absolute Range = 31 to 99
Middle 50% Range = 44 to 64
Skewness = .514

Percentiles: 10th = 37; 20th = 41;
30th = 45; 40th = 49; 50th = 52;
60th = 56; 70th = 60; 80th = 67; 80th = 67;
90th = 75

The sample sizes for math tests 3, 4, and 5 are somewhat small for establishing definitive ARC norms. During the next period for publishing Institutional Effectiveness, the sample sizes will have increased sufficiently thereby adding more confidence in any statistical analyses using these tests. In the outcomes described next, we combined the two groups who took different level math tests but enrolled in the same course. Individuals in one of the two groups either: 1) scored below the designated cut score on either test appropriate for the specific course, or 2) scored at/above the cut score on either test. For example, cut scores for the Math 51 course: Math 1 test = 48 or Math 2 test =26.

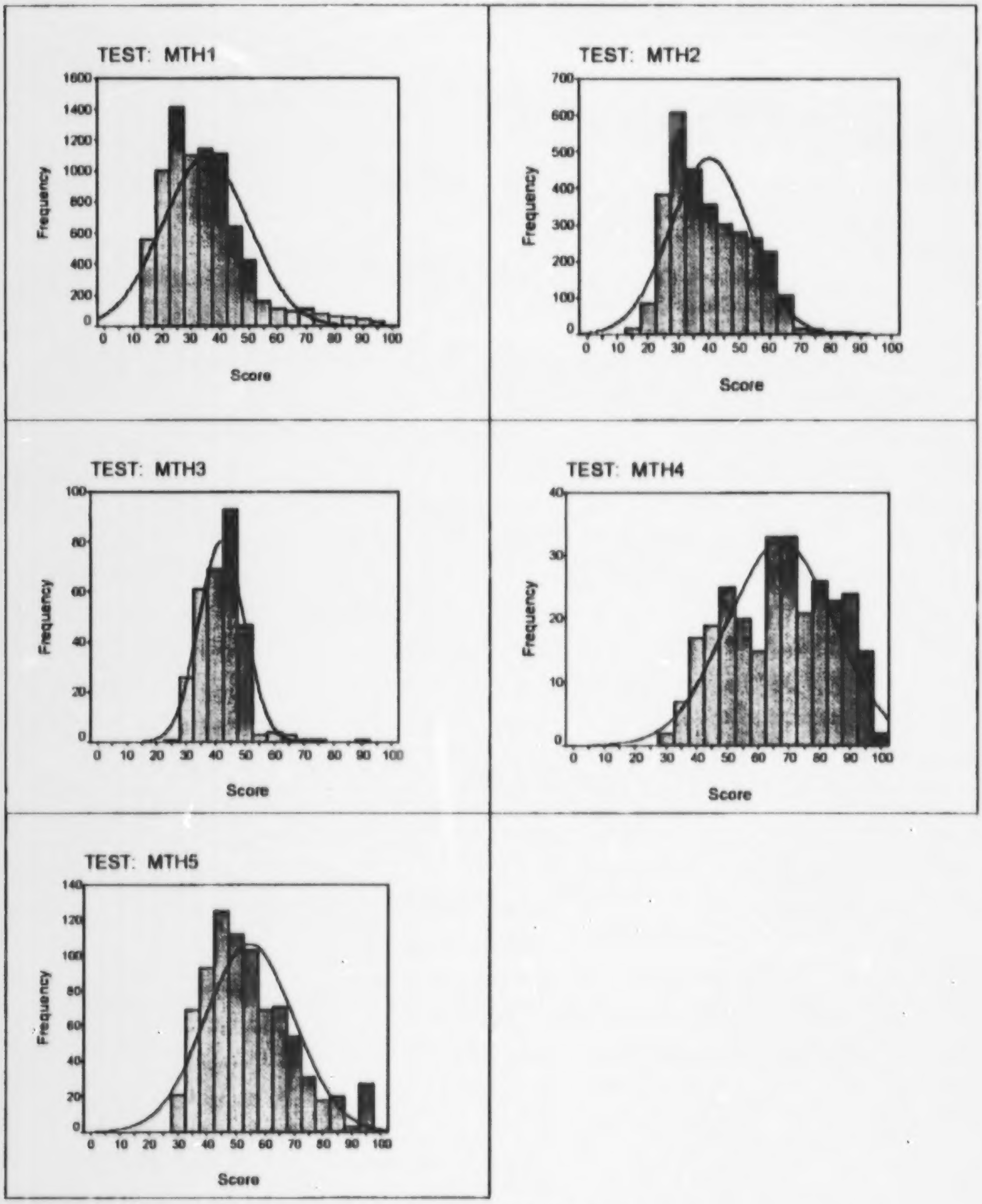

Figure 19. ARC Normative Distributions for Five Compass Math Tests.

Math 51 Analysis

Conditions for analysis: No evidence of enrolling in a lower level math course, test date prior to or beginning of Math 51, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 48 on Math 1 Test (87th percentile) or 26 on Math 2 Test (11th percentile)	Total number of students this analysis: 723 (100%) Number of students below cut = 289 (40.0%) Number of students at/above cut = 434 (60.0%)

Math 51 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 41.20%	(b) 58.10%
Course Non-Success	(c) 58.80%	(d) 41.90%
Totals	100.00%	100.00%

Math 51 Four-Cell Analysis
Overall Course Success Rate = 51.3%
Four-Cell Test Prediction Accuracy = 58.4% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) & Cut Score Break (1,2) = .166 (p<.001)

Comment on Math 51: All correlation values between test cut-score levels and success or grades are statistically different from zero, yet they are low (e.g., correlation = .166). They are too low for accurate prediction of grade or success from knowledge of test score. When statistical manipulations were made to adjust for such things as restricted range, grading variability among instructors, and deleting data on students who withdrew from the course, correlation values did not change appreciably (See Table 6 in this report). In view of these results, the Compass math test for entrance into Math 51 is not recommended.

Math 53 Analysis

Conditions for analysis: No evidence of enrolling in Math 51 or a lower level math course, test date prior to or beginning of Math 53, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 41 on Math 2 Test (59th percentile) or 31 on Math 3 Test (5th percentile)	Total number of students this analysis: 324 (100%) Number of students below cut = 92 (28.4%) Number of students at/above cut = 232 (71.6%)

Math 53 Four-Cell Analysis

Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 47.80%	(b) 62.90%
Course Non-Success	(c) 52.20%	(d) 37.10%
Totals	100.00%	100.00%

Math 53 Four-Cell Analysis
Overall Course Success Rate = 58.6%
Four-Cell Test Prediction Accuracy = 59.9% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) & Cut Score Break (1,2) = .138 (p<.05)

Comment on Math 53: As with Math 51, nearly all correlation values between test cut-off levels and grades are statistically different from zero, yet they are also low (e.g., correlation = .138). They are too low to enable accurate prediction of grade or success from knowledge of test score. It is acknowledged that the sample sizes are relatively small. The percentage differences (above vs. below cut) and various grades show that the test is at least predicting in the correct direction. When statistical adjustments were made for such things as restricted range, grading variability among instructors, and deleting data on students who withdrew from the course, correlation values did not change for the better (see Table 6 in this report). Given these results, the use of the Compass math test for entrance into Math 53 is not recommended.

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Math 15 Analysis

Conditions for analysis: No evidence of enrolling in Math 53 or a lower level math course, test date prior to or beginning of Math 15, and highest score of record for student. Course success is defined as the percentage of final grade notations that are A, B, C, or CR.

Cut Score = 52 on Math 4 Test (25th percentile) or 31 on Math 5 Test (1st percentile)	Total number of students this analysis: 50 (100%) Number of students below cut = 3 (6.0%) Number of students at/above cut = 47 (94.0%)

Math 15 Four-Cell Analysis		
Outcome	Below Cut Score	At/Above Cut Score
Course Success	(a) 66.70%	(b) 70.20%
Course Non-Success	(c) 33.30%	(d) 29.80%
Totals	100.00%	100.00%

Math 15 Four-Cell Analysis
Overall Course Success Rate = 70.0%
Four-Cell Test Prediction Accuracy = 68.0% (b + c cell frequencies relative to total sample size)
Correlation Between Success (1,2) & Cut Score Break (1,2) = -.018 (ns)
Caution: Sample size too small for definitive interpretation. Consider only as trend.

Comment on Math 15: Unfortunately, no definitive conclusions can be drawn due to a small sample size. However, what data exist about the relationship between Compass tests and the trigonometry course are not encouraging in so far as using the test for course placement (correlation = -.018. Also see Table 6 in this report).

Interpreting Table 6 Containing All Correlational Data

In Table 6 are found all the basic correlations from the various courses plus additional correlations based on correction factors. It has been a belief by some individuals that if all W's (withdrew from course after census) were deleted from the analysis, the correlations would be acceptable. To check on this, the correlations were rerun after deleting all W's. Another suggestion about standard data analysis is that the correction for restriction of range should be applied, so that is included. Finally, it is well established that faculty grading variability is apt to alter any correlation value between scores and grades. In selected courses that correction was applied.

The 4-cell values that have been shown in this institutional effectiveness report are also found in Table 6. In a larger report on assessment (The Evaluation of Present Course Placement Procedures Using the Compass Tests), the 8-cell values are analyzed. The 8-cells are based upon the grades of A, B, C + CR, versus all unsuccessful notations for the above and below cut-score groups. Likewise, the correlation values that omit any cut score and simply relate all scores to all grades are also found in that report as well as Table 6 here (see full r).

Also in Table 6 is a correction for instructor grading variability. Student letter grades were converted into z scores by the formula (X-Mean)/SD within each instructor. Thus an "A" earned from an instructor with a low grade-point average would result in a higher z value for a student than if earned from an instructor with a high grade-point average. The net effect is to give all instructors the same z average and standard deviation. The corrected values are referred to as standardized grades.

Table 6. Correlation Coefficients Between Compass Scores and Grades Under Varying Data Conditions for English Math, Reading.

Course	Original Correlation	Omitting All WT's	Correction Restricted Range	Standardized Grades
English 1A				
4-cell =	-.038	-.009		
8-cell =	.114	.124		
Full r =	.027	.074	.053	.024
English 58				
4-cell =	.034	.064		
8-cell =	.113	.142		
Full r =	.111	.179	.184	.130
English 256				
4-cell =	.087	.050		
8-cell =	.097	.074		
Full r =	.099	.124	.201	.111
Math 51				
4-cell =	.166	.133		
8-cell =	.176	.154		
Mth1 Full r =	.173	.094		.211
Mth2 Full r =	.235	.157		.249
Math 53				
4-cell =	.138	.120		
8-cell =	.158	.150		
Mth2 Full r =	.198	.186		.244
Mth3 Full r =	.054	-.055		.041
Math 15				
4-cell =	.018	-.100		
8-cell =	-.114	-.169		
Mth4 Full r =	-.022	-.113		n/a
Mth5 Full r =	.065	-.015		n/a
English 4/5				
4-cell =	-.210	-.359		
8-cell =	-.228	-.376		
Full r =	-.015	-.140	-.023	-.065
English 71				
4-cell =	-.081	-.114		
8-cell =	-.145	-.184		
Full r =	-.133	-.136	-.305	-.130
English 268/270				
4-cell =	.112	.178		
8-cell =	.171	.235		
Full r =	.131	.157	.144	.082

Summary of Assessment Section

- During the period from the fall semester of 1999 to the fall term of 2001, 16,848 individuals were given at least one of the Compass tests. Yet during that same period plus the spring 2002 term, only 13,245 students had registered for a class at ARC. This means that 21.4% of all individuals given the Compass test did not enroll at ARC. Conversely, during the period of summer 1996 through spring 2001, there were 30,472 enrollments in English 1A, 58 and 256 combined. Yet 44.4% of those enrollments did not have a test of record at ARC. (Note: all matriculation exempt students not counted and no prior course work in English, e.g., English 1A enrollments showed no evidence of prior 58 or 256).

- The original correlations between scores and grades or success are either very low, non-existent, or even negative. The median value of all full Pearson correlations (cut scores not considered) is .131. The conclusion is that students taking the Compass test produce scores that have little or no relationship to final grades in the English writing, reading,, or mathematics courses. If course entry decisions are based in part upon Compass test outcomes, then such decisions are of dubious value. ARC is performing a disservice to students by having all new students take the Compass test for use in academic counseling.

- The reasons for such low correlations between scores and final grade outcomes are due to one or more of the following: a) Compass test scores are simply unrelated to the student efforts and skills produced in a course. b) Instructors are grading students on factors not indicative of true learning or achievement. c) Final grade criteria within the same course are inconsistent from one instructor to the next. With such inconsistency no test can predict final grades. The best predictor of student grades is knowledge of the instructor selected.

Implications for Planning

1. Investigate the reasons behind why so many students who have been given the Compass test do not subsequently enroll at ARC (21.4%). Also determine why 44.4% of English enrollments have no assessment test on record at ARC.

2. Either temporarily suspend student assessment with the Compass test or render all test prerequisites as "advisory only." The data do not support the use of Compass test scores as a prerequisite for course entry.

3. Request of the State Chancellor's Assessment Group a plan to allow for change or experimentation without monetary penalty.

4. Offer open discussion sessions about test prerequisites to all appropriate staff.

5. Have district-wide committees develop entrance course standards.

6. Begin a search for a testing company or a select group of individuals who will produce a set of tests based upon course entrance standards. Implement the new tests as soon as possible.

7. Start the process of evaluating the use of multiple measures and their relationship with grades or success.

Overall Student Performance: Success Rate the Basic Yardstick

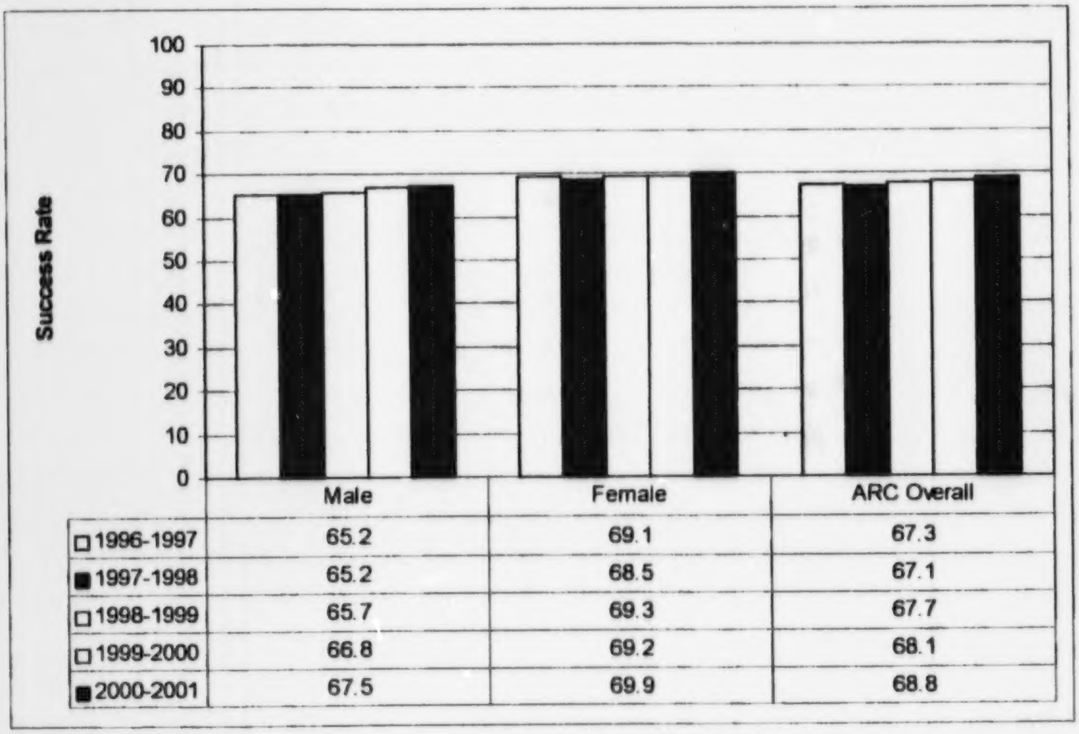
> ***Composite grade distributions and student success rates (A, B, C, CR notations) provide vital feedback that enables the college to determine how its students are performing in their courses. When the same data are broken out by student demography, the results often point to specific groups that need more help and where an intervention treatment might be advisable.***

If all institutional evaluation had to be reduced to two measures, one would certainly be the condition of enrollments because that is the lifeblood of a community college. Diminished enrollments spell trouble with state support and may also indicate something about the needs for and the quality of an institution and its programs. The other measure would be some index of student performance. Traditionally GPA has been used, but that measure suffers from not capturing more recent notations like WT (withdrew from class with notation on transcript), and CR and NC (credit and no-credit). To overcome these limitations to GPA, a success rate has been created which is simply the percentage of student grades that are A, B, C, or CR relative to all grade notations on student transcripts. Thus a 50% success rate means that half of a student's courses ended with grade notations of A, B, C, or CR. It also means that 50% of the grade notations were D, F, NC, I (incomplete), or WT. While success rate is not a perfect measure either, it is the one most frequently used to indicate student performance within a specific cohort, e.g., all freshmen, or students enrolled in a particular course.

High success rates for students, instructors, courses, programs, and for institutions are usually viewed positively unless an offset measure can show that students really are not learning as well as the success rate would indicate, i.e., the high success rate is simply grade inflation. Conversely, low success rates are viewed negatively unless it can be shown that the subject matter is inherently difficult, and those few students who are successful can demonstrate quality learning. The important thing is to look for all reasons behind unusually high or low success rates.

As indicated in earlier sections, the program called the Sacramento Regional Public Safety Training Center has dramatically increased the overall enrollment at ARC. Since students in that program are graded only upon a credit/no-credit basis, their inclusion with institutional data would seriously skew success rate results toward the high end. Because of this, the SRPSTC program will usually not be included with other institutional success rate totals.

Success Rates by Gender and ARC Totals by Academic Year

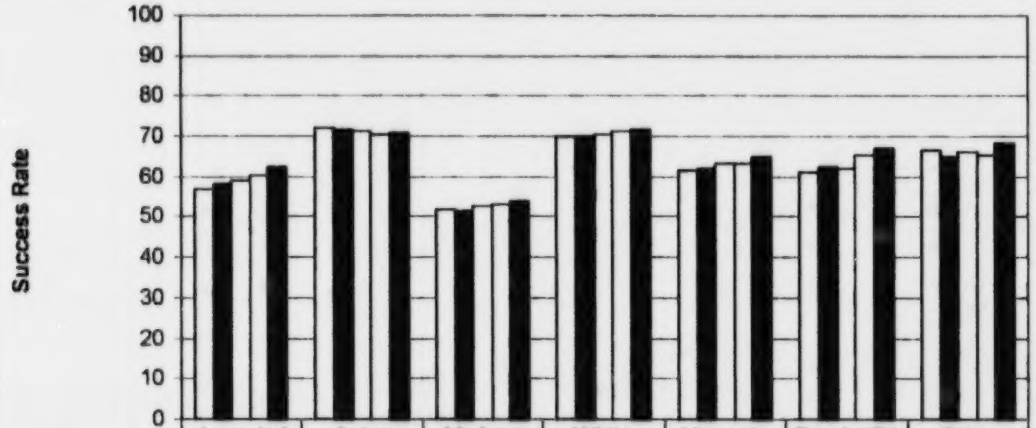


	Male	Female	ARC Overall
☐ 1996-1997	65.2	69.1	67.3
■ 1997-1998	65.2	68.5	67.1
☐ 1998-1999	65.7	69.3	67.7
☐ 1999-2000	66.8	69.2	68.1
■ 2000-2001	67.5	69.9	68.8

Figure 20. Success Rates for Males, Females, and Overall for Five Years (SRPSTC Not Included).

Comment: Success rates remain at the 65 to 69% range with a 1.5% recent increase from five years ago. It is also a fact that the success rate for ARC's female students typically exceeds the male success rate by 3 percentage points.

Success Rates for Major Ethnic Groups by Academic Year

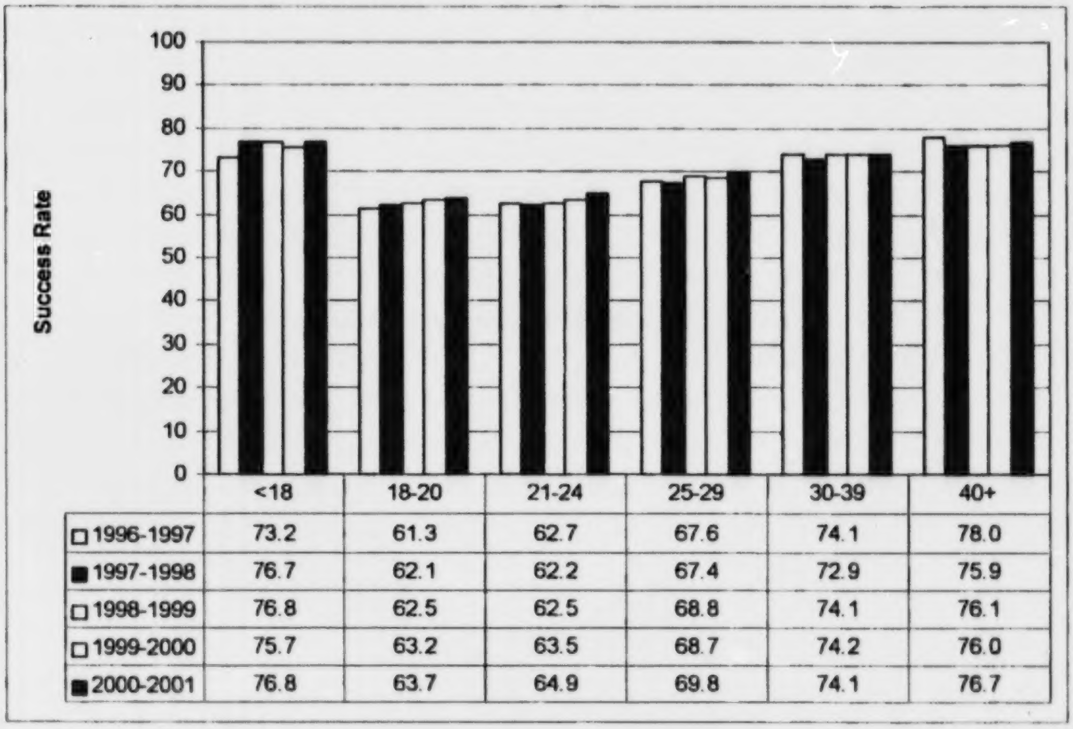


	Amer Ind	Asian	Afr Amer	White	Hispanic	Pac Isl/Fil	Other
□ 1996-1997	57.0	72.0	51.8	70.2	61.6	61.1	66.7
■ 1997-1998	58.1	71.9	51.4	70.0	61.9	62.4	64.8
□ 1998-1999	59.0	71.4	52.8	70.5	63.4	62.2	66.2
□ 1999-2000	60.5	70.3	53.0	71.2	63.1	65.2	65.6
■ 2000-2001	62.5	70.8	53.9	71.6	65.0	66.9	68.4

Figure 21. Success Rates Based Upon Unduplicated Counts of Student Ethnic Groups Over Five Years (SRPSTC Not Included).

Comment: Most ethnic groups have shown slight increases in success rates over the past five years – the one exception being Asian students. However, Asian students along with white students, still have the highest success rates on campus. The five-year percentage differences or gains are: American Indian = +5.5%; Asian = –1.2; African American = +2.1; white = +1.4; Hispanic = +3.4; Pacific Islander & Filipino = +5.8; and other = +1.7.

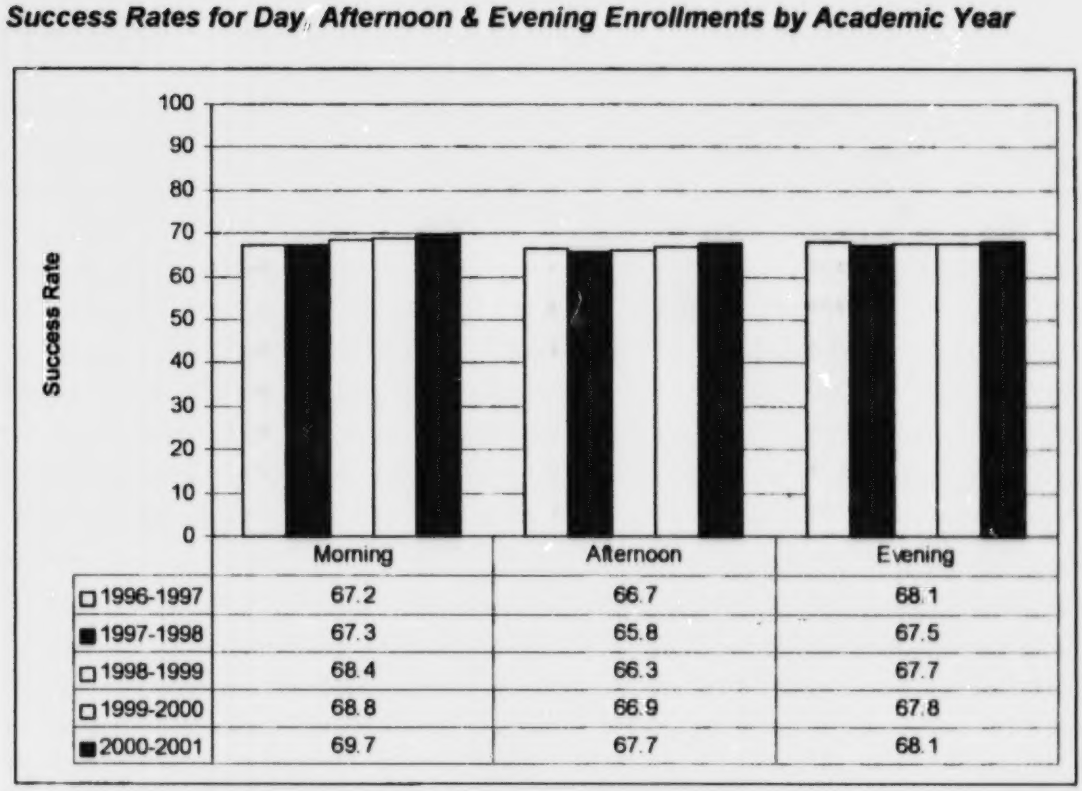
Success Rates for Age Groups by Academic Year



	<18	18-20	21-24	25-29	30-39	40+
□ 1996-1997	73.2	61.3	62.7	67.6	74.1	78.0
■ 1997-1998	76.7	62.1	62.2	67.4	72.9	75.9
□ 1998-1999	76.8	62.5	62.5	68.8	74.1	76.1
□ 1999-2000	75.7	63.2	63.5	68.7	74.2	76.0
■ 2000-2001	76.8	63.7	64.9	69.8	74.1	76.7

Figure 22. Success Rates Based Upon Unduplicated Counts of Student Age Groups Over Five Years (SRPSTC Not Included).

Comment: As can be observed from Figure 22, "older" usually coincides with higher success rates with one exception, the youngest group (< 18), made up of predominately accelerated high school students. The five-year percentage differences or gains in success rates by age group are: < 18 = +3.6; 18-20 = +2.4; 21-24 = +2.2; 25-29 = +2.2; 30-39 = 0.0; 40 and above = -1.3.



	Morning	Afternoon	Evening
□ 1996-1997	67.2	66.7	68.1
■ 1997-1998	67.3	65.8	67.5
□ 1998-1999	68.4	66.3	67.7
□ 1999-2000	68.8	66.9	67.8
■ 2000-2001	69.7	67.7	68.1

Figure 23. Five-Year Success Rates for Day, Afternoon, and Evening Enrollments (SRPSTC Not Included).

Comment: Both morning and afternoon enrollments show slight gains in success rates from five years ago, +2.5% for morning and +1.0% for afternoon. Evening success rates stayed the same. Covering five years, morning and evening enrollments have about the same overall average that is slightly higher than the afternoon enrollments.

Success Rates by Area for Five Academic Years

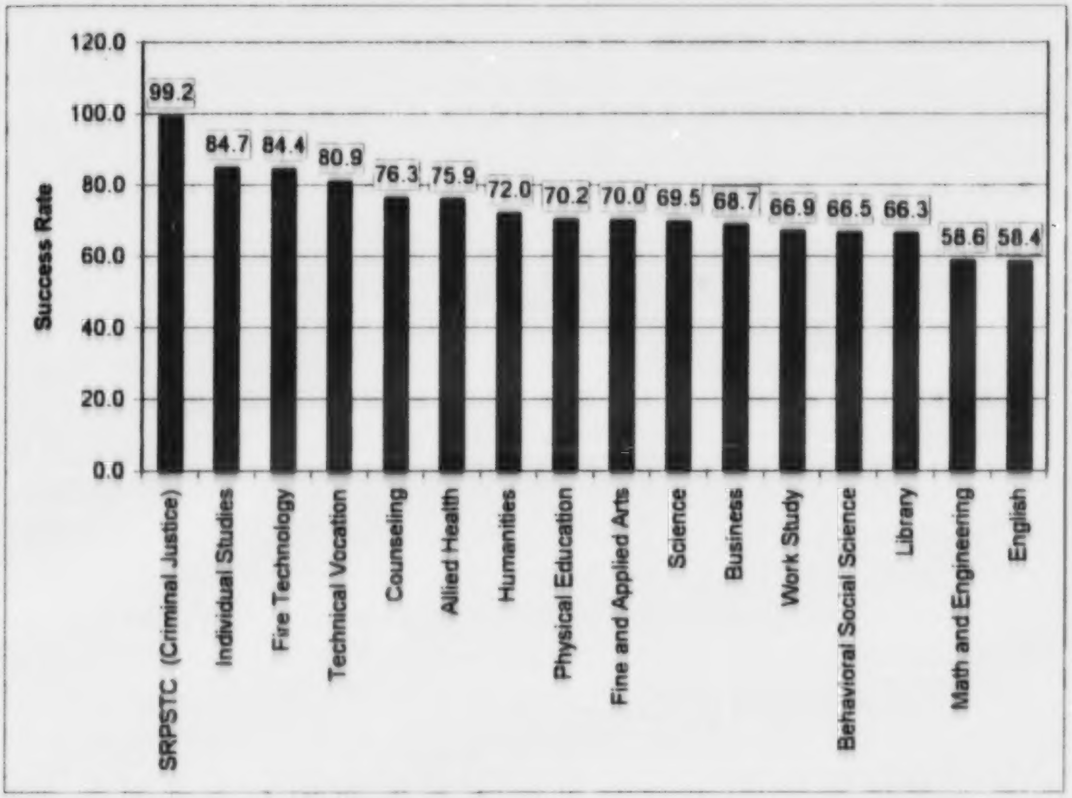


Figure 24. Composite Five-Year Success Rates by Academic Areas.

__Comment__: The success rates shown in Figure 24 are ordered from high to low. Math & Engineering and English areas are the lowest with success rates slightly over 58%. This indicates that of all the grade notations within five years, 58% were either A, B, C, or CR. This also means that 42% were either D, F, NC, or WT.

Grade Distributions and Success Rates for Self Reported Income (5 Academic Years)

Table 7. Composite Five-Year Grades and Success Rates by Levels of Self-Reported Income (SRPSTC Not Included).

	A %	B %	C-CR %	D %	F %	WT %	I %	Success	Total
Less Than $7,500	23.5	17.4	18.9	4.0	11.9	22.9	1.3	59.9	125,597
$7,500-$9,999	25.2	19.2	20.0	3.7	10.2	20.7	1.0	64.4	53,747
$10,000-$14,999	26.8	20.2	19.6	3.6	9.1	19.6	1.1	66.5	63,395
$15,000-$19,999	28.5	19.8	19.3	3.3	9.1	19.0	1.0	67.6	41,973
$20,000-$24,999	29.8	20.3	18.5	3.6	8.5	18.1	1.1	68.7	48,311
$25,000-$29-999	32.0	21.6	17.9	3.4	7.6	16.6	1.0	71.5	39,023
$30,000-$34,999	33.3	20.7	18.1	3.6	7.4	16.0	0.9	72.1	38,472
$35,000-$39,999	33.6	21.0	18.1	3.3	7.4	15.7	1.0	72.6	30,620
$40,000 or More	35.9	20.4	17.5	3.5	6.8	15.1	0.9	73.7	165,101

__Comment__: It is an interesting fact that in Table 7 there is a perfect rank-order correlation between success rates and levels of income. While it might be tempting to infer a strong cause-and-effect relationship, one really should never do so. Undoubtedly, age is also correlated with income, and perhaps older students take fewer courses and are more successful in what they do take. Still, one predictor of academic success is income.

Grade Distributions and Success Rates by Academic Course Level

Table 8. Composite Five-Year Grades and Success Rates by Types of Courses (SRPSTC Not Included).

	A %	B %	C-CR %	D %	F %	WT %	I %	Success	Total
University Transfer Level [1-49]	31.9	20.1	16.4	3.7	8.2	18.6	1.1	68.5	510,373
Non-Transfer/Occupation [50-99]	26.0	17.3	22.3	4.1	11.3	17.6	1.4	65.6	105,309
Apprenticeship [100-199]	28.5	35.3	27.0	1.7	4.2	1.4	1.8	90.8	11,763
Basic Skills [200-299]	10.0	13.0	38.0	2.8	15.3	20.8	0.2	61.0	41,529

__Comment__: It is interesting that the success rate in basic skill courses is the lowest. One could explain that by attributing it to the preparation of students and/or the grading standards of the instructors. Whatever the reasons, the lower rate does help explain why substantially fewer students in basic skill levels ever reach transfer courses.

Summary of Student Performance

- Overall student success rate has increased about 1.5% from five years ago.
- The gains in success rate from five years ago apply to both sexes, nearly all ethnic groups, and most age groups.
- The math and engineering area, and the English area have the lowest success rates on campus, about 58%.
- Lower success rates are also identified with lower income levels, and in basic skills and other non-transfer courses.

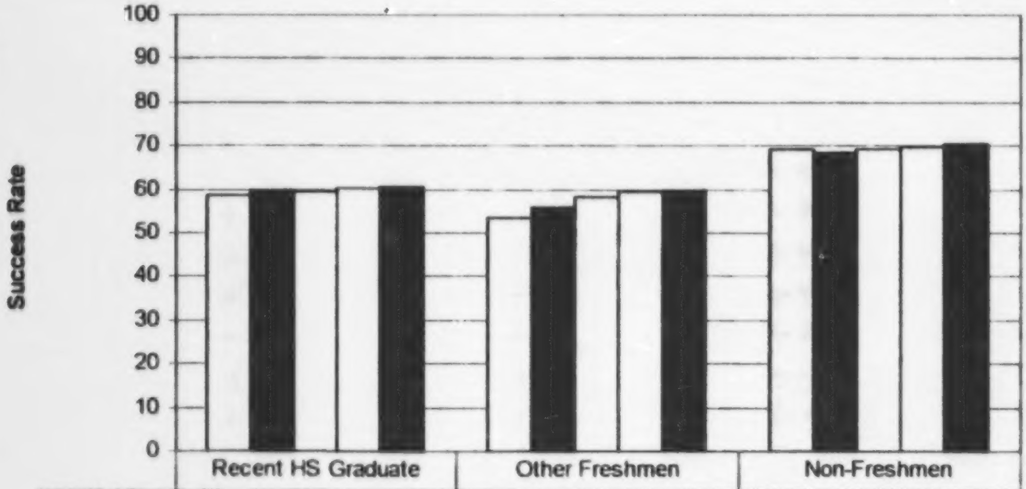
Implications for Planning

1. Develop strategies to increase the overall success rates of students.
2. Determine the types of problems students encounter in all courses where there are very low success rates.
3. Devise new support techniques for increasing the student success rate in basic skill courses as well as non-transfer math and English courses.

New Freshmen Academic Performance

New freshmen are the group with the lowest first-semester success rate. As such, they must be considered "at risk" because they are new to the college experience. This section illustrates their performance in detail.

First-Term Success Rates for Recent High School Graduates, Other Freshmen, and Non-Freshmen by Academic Year



	Recent HS Graduate	Other Freshmen	Non-Freshmen
□ 1996-1997	58.5	53.4	69.2
■ 1997-1998	59.7	55.8	68.6
□ 1998-1999	59.6	58.3	69.2
□ 1999-2000	60.1	59.4	69.6
■ 2000-2001	60.5	59.9	70.3

Figure 25. First-Semester Success Rates For New Freshmen and Non-Freshmen for Five Years (SRPSTC Not Included).

Comment: Recent high school graduates (first-time freshmen, a high school graduate, and under 20 years of age) tend to slightly outperform other freshmen. However, neither one of these two groups reach the success rates of non-freshmen. Success gains over the five years are: Recent high school graduate = +2.0%; other freshmen = +6.5%; and non-freshmen = +1.1%. Noteworthy is the fact that both freshmen groups constitute an at-risk group given their success, persistence, and probation rates.

Freshmen Success Rate by Demographics (5 Academic Years)

Table 9. First-term Freshmen Success Rate by Gender for Five Years.

Gender	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Female	58.5	60.8	62.6	61.0	62.5
Male	53.1	54.0	54.7	58.3	57.5

Comment: In terms of freshmen success rate, female students exceed male students by a five-year average of 5.56%.

Table 10. First-term Freshmen Success Rate by Ethnicity for Five Years.

Ethnicity	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Amer Ind/Alaskan	47.1	51.0	42.4	56.9	43.4
Asian	61.9	64.0	61.4	63.0	65.9
African American	37.5	38.3	41.1	41.3	43.6
White	59.2	61.9	62.2	62.8	63.3
Hispanic	53.3	52.3	55.3	55.5	56.2
Pac Isl/Filipino	50.7	54.2	54.3	62.5	58.9
Other	61.2	58.3	63.5	64.9	62.5

Comment: Asian, white, and "other" freshmen have average success rates between 62-63%. Hispanic, Filipino, and Pacific Islander freshmen fall between 56 and 59%. The lowest freshmen success rates are for American Indian and African American students, about 43.5%.

Table 11. First-term Freshmen Success Rate by Age Groups for Five Years.

Age Group	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
<18	61.0	62.7	70.3	63.5	68.9
18-20	54.8	56.7	56.1	57.0	58.2
21-24	46.5	47.6	50.9	54.8	54.8
25-29	56.8	56.6	58.5	63.2	61.8
30-39	63.7	65.0	69.8	68.0	65.0
40+	68.8	68.5	72.3	69.6	68.1

Comment: As has been found in previous work, the highest freshmen success averages are for the 40+ age group followed by the 30-39, then the <18 students. The most "at risk" freshmen fall within the ages of 18 to 24.

Table 12. First-term Freshmen Success Rate by English as Primary Language for Five Years.

Primary Language	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
English Primary Language	53.9	55.4	56.6	57.7	57.6
English Not Primary Language	69.3	71.2	71.0	69.3	71.1

Comment: Another common observance is that ESL freshmen out perform non-ESL freshmen. The five-year success averages are 56.2% for non-ESL and 70.4% for ESL freshmen.

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Table 13. First-term Freshmen Success Rate by Informed Goal for Five Years.

Informed Goal	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Transfer	57.8	58.3	58.5	58.6	60.5
Degree	55.6	59.6	63.6	63.4	63.9
Certificate	65.0	68.7	68.9	63.6	62.1
Other Goal	51.0	55.3	58.9	63.9	59.4

Comment: Freshmen who indicate a goal of "obtaining a degree (AA/AS)" or a "certificate" have the highest success rates (averages of 61.2% and 65.7%). Those who indicate a goal of "transfer" average to 58.7% while "other goal" averages to 57.7%.

Table 14. First-term Freshmen Success Rate by Self-reported Income for Five Years.

Self-reported Income	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Less Than $7,500	45.0	45.6	50.5	52.0	52.7
$7,500-$9,999	56.4	58.5	59.0	55.4	56.9
$10,000-$14,999	56.7	58.4	57.9	56.6	57.3
$15,000-$19,999	58.8	62.4	60.0	59.8	65.0
$20,000-$24,999	58.2	60.7	62.1	58.9	61.4
$25,000-$29-999	59.6	63.0	65.8	65.1	63.7
$30,000-$34,999	59.8	64.3	62.9	67.6	65.0
$35,000-$39,999	61.9	65.7	64.7	69.6	64.8
$40,000 or More	64.1	64.7	64.2	65.7	65.7

Comment: As observed with all students, first-term freshmen success rates also show a high rank-order correlation with self-reported income (rho = .967).

Table 15. First-term Freshmen Success Rate by Enrollment Status for Five Years.

Enrollment Status	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Full-time	63.1	64.6	64.8	64.4	66.5
Middle-time	46.2	49.4	52.8	54.3	52.5
Part-time	54.9	55.7	55.9	58.7	58.4

Comment: During their first semester, full-time freshmen have a five-year average success rate of 64.7%, middle-time 51%, and part-time 56.7%. There has been gains in all groups from five years ago.

Table 16. First-term Freshmen Success Rate by Course Level for Five Years.

Course Level	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
University Transfer Level [1-49]	56.9	59.1	60.2	58.8	59.3
Non-Transfer/Occupation [50-99]	51.8	51.6	54.2	56.1	56.0
Apprenticeship [100-199]	93.7	92.9	92.4	87.0	78.4
Basic Skills [200-299]	57.2	59.4	59.1	61.7	62.6

Comment: Table 16 gives the first-term success rates for freshmen based upon what level of courses they enrolled. The five-year averages are as follows: university transfer courses = 58.9%; non-transfer or occupational courses = 53.9%; apprenticeship courses = 88.9%; and basic skills courses = 60%. With the exception of apprenticeship, current first-term success rates have increased from five years ago.

High School Success Rates by 5 Academic Years

Table 17. First-Term ARC Success Rates for Recent High School Graduates of Specific High Schools.

High School	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	Overall
Bella Vista	65.3	67.2	60.6	66.7	65.8	64.8
Casa Robles	69.7	65.9	52.5	63.2	71.8	65.0
Center	69.0	60.4	55.1	62.3	60.4	61.3
Christian Brothers	76.9	57.5	77.9	75.0	64.9	69.6
Cordova	65.3	59.1	56.3	61.1	59.5	60.4
Davis	55.3	62.0	67.7	64.9	66.3	64.0
Del Campo	63.9	62.9	64.1	57.8	61.5	61.9
El Camino	65.4	61.9	64.8	66.0	62.7	64.3
Elk Grove	63.5	52.6	55.1	63.2	47.1	56.0
Encina	57.5	62.2	52.9	57.3	46.6	55.3
Folsom	55.9	57.3	69.0	49.7	69.3	61.1
Foothill	52.5	54.8	59.8	60.2	64.6	58.8
Grant Union	33.5	32.0	44.4	38.7	51.8	39.7
Highlands	52.4	57.9	59.0	54.1	62.3	56.9
Jesuit	60.7	60.5	58.2	62.2	63.3	60.5
Johnson Main	50.0	54.3	46.4	51.9	50.6	50.8
Johnson West	60.4	61.2	75.7	71.4	56.4	63.4
Mesa Verde	57.4	50.3	54.1	62.2	56.5	56.2
Mira Loma	57.1	59.5	53.9	63.4	69.7	60.7
Oak Ridge	68.2	70.5	70.9	71.7	76.9	71.3
Ponderosa	71.3	75.2	61.3	83.2	72.9	72.8
Rio Americano	55.8	57.9	64.7	61.7	68.3	62.3
Rio Linda	48.9	55.5	54.7	56.7	51.4	53.3
River City	57.8	52.1	55.3	76.3	55.9	59.4
Roseville	54.0	55.6	56.9	58.1	68.0	56.0
Sacramento	48.5	59.3	51.4	49.1	66.0	55.1
San Juan	57.6	63.5	51.8	64.5	53.1	58.7
St Francis Girls	62.9	74.2	78.4	69.7	84.1	74.6
Woodcreek	0.0	0.0	50.0	67.0	57.8	60.7
Woodland	56.3	63.3	52.9	61.3	60.3	58.9

Comment: Table 17 (in alpha order) can also be compared to Table 2 that lists the top 30 feeder high schools in order of ARC enrollment size. For example, Table 2 shows a five-year total of 453 students from Bella Vista High School that enrolled at ARC. In Table 17, these 453 students had an overall first-term success rate of 64.8%. In rank order, the top 10 freshmen first-term overall success rates are St. Francis Girls, Ponderosa, Oak Ridge, Christian Brothers, Casa Robles, Bella Vista, El Camino, Davis, Johnson West, and Rio Americano. The lowest 10 are: Grant Union, Johnson Main, Rio Linda, Sacramento, Encina, Elk Grove, Roseville, Mesa Verde, Highlands, and San Juan.

Freshmen First Semester Performance by Academic Area (Five Years)

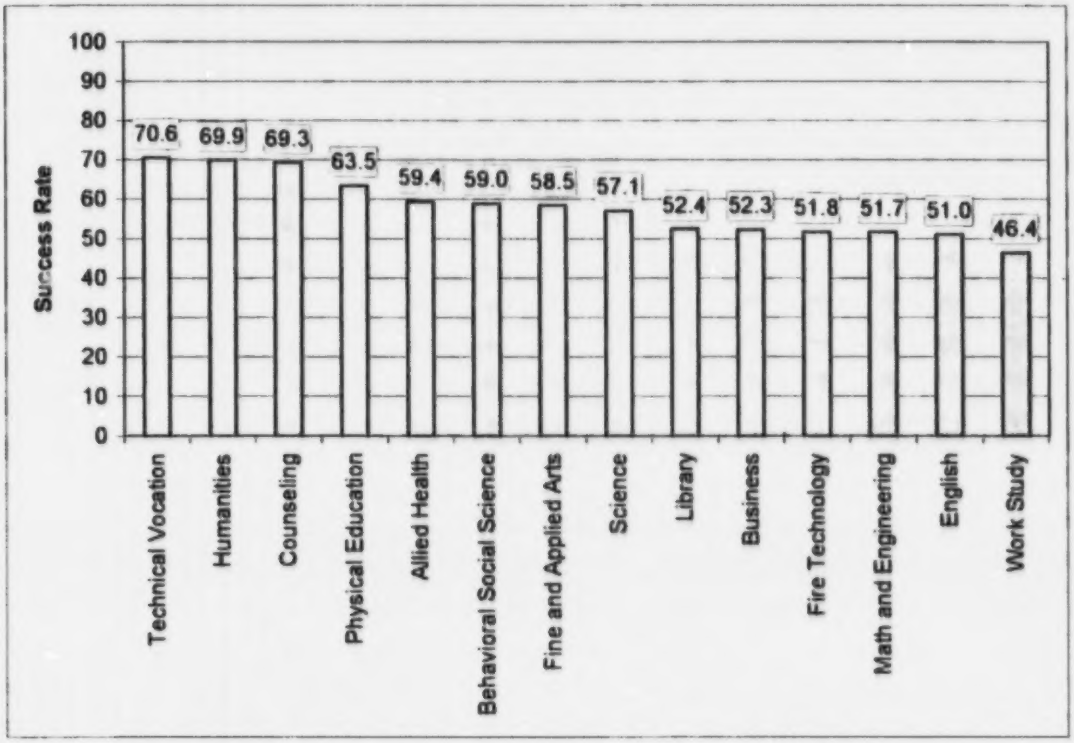

Figure 26. First-Semester Freshmen Success Rates in Rank-Order by Academic Area.

Comment: If one considers 60% as a reasonable success rate goal for new freshmen, then the higher academic areas as seen in Figure 26 would include Technical/Vocational, Humanities, Counseling and Physical Education. If a 55% to 59% success rate is deemed "just OK, but not desirable," then the areas of Allied Health through Science fit in that category. Finally, if <55% is considered as "unacceptable," then Library through Work Study fall in that category. Unfortunately, English and math courses that are required by most students, also fall into the last category.

Freshmen First Semester Performance by Academic Discipline (Five Years)

Table 18. First-Semester Freshmen Success Rates in Ascending Order by Academic Discipline.

Discipline	Enrollment	A %	B %	C+CR %	D %	F+NC %	WT %	I %	Success Rate
Forestry	74	8.1	6.8	17.6	12.2	23.0	24.3	8.1	32.4
Small Business Management	274	13.9	12.0	8.4	3.6	29.6	32.5	0.0	34.3
Marketing	94	14.9	10.6	12.8	1.1	37.2	22.3	1.1	38.3
Commercial Music	413	16.7	13.6	10.4	6.5	16.7	33.7	2.4	40.7
Real Estate	258	6.2	13.2	21.3	5.0	17.8	35.7	0.8	40.7
Business	1,404	13.4	13.5	15.2	5.5	23.6	25.7	3.0	42.2
Accounting	596	16.6	15.6	10.6	6.9	18.1	31.7	0.5	42.8
Automotive Collision	45	8.9	13.3	22.2	17.8	20.0	13.3	4.4	44.4
Sociology	790	14.4	16.5	14.4	8.2	21.8	24.1	0.6	45.3
Economics	739	9.7	15.6	20.3	9.5	18.8	25.2	0.9	45.6
Paramedic	52	9.6	17.3	19.2	5.8	46.2	1.9	0.0	46.2
History	3,313	8.4	17.3	20.7	8.2	18.0	25.5	1.9	46.3
Philosophy	734	12.5	20.6	13.5	7.4	14.9	28.7	2.5	46.6
Computer Science	387	17.8	16.3	13.7	6.2	15.8	30.0	0.3	47.8
Management Traditional	72	33.3	5.6	9.7	1.4	20.8	27.8	1.4	48.6
Nutrition and Foods	749	10.8	17.5	20.6	6.0	12.1	32.6	0.4	48.9
Reading	4,810	9.9	10.9	28.5	4.0	23.1	23.0	0.5	49.3
Recreation	89	28.1	7.9	14.6	4.5	10.1	20.2	14.6	50.6
Library/Media Resources	199	21.6	19.6	9.5	3.0	16.6	27.1	2.5	50.8
Journalism	165	14.5	17.0	19.4	8.5	17.0	21.8	1.8	50.9
Mathematics	10,731	13.1	18.7	19.0	6.8	15.0	27.2	0.2	50.9
Hospitality Management	332	18.4	19.6	13.6	6.6	19.6	20.8	1.5	51.5
English	11,085	12.0	22.0	17.7	5.4	13.7	27.6	1.6	51.7
Fire Technology	588	9.4	18.9	26.9	2.9	23.5	18.4	0.2	51.8
Foreign Languages	1,268	20.8	18.1	13.2	3.9	11.0	32.4	0.5	52.1
Biology	1,677	14.0	21.5	17.1	7.2	15.2	24.6	0.5	52.5
Political Science	969	11.8	19.8	21.1	8.9	15.5	21.8	1.2	52.6
Interior Design	237	30.0	17.7	6.8	4.2	13.1	24.1	4.2	54.4
Management TQM	112	44.6	0.9	8.9	0.0	18.8	15.2	11.6	54.5
Human Services	383	23.8	23.0	7.8	2.6	10.2	32.4	0.3	54.6
Legal Assisting	194	19.1	20.6	14.9	5.7	21.6	17.0	1.0	54.6
Natural Resources	173	3.5	11.0	40.5	6.4	13.9	22.5	2.3	54.9
Computer Information Science	5,711	27.6	16.4	11.0	3.9	22.7	18.0	0.5	55.0
Humanities	401	13.7	21.4	20.2	5.7	16.2	21.9	0.7	55.4
Psychology	6,259	12.7	18.3	24.4	7.1	10.9	25.7	1.0	55.4
Geography	524	18.7	19.8	17.9	7.3	14.9	20.4	1.0	56.5
Geology	259	23.6	16.6	17.0	5.4	9.7	25.9	1.9	57.1

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Table 18 Continued

Discipline	Enrollment	A %	B %	C+CR %	D %	F+NC %	WT %	I %	**Success Rate**
Horticulture	216	19.0	18.5	19.9	5.1	8.3	28.7	0.5	**57.4**
GIS	19	26.3	26.3	5.3	0.0	15.8	26.3	0.0	**57.9**
Health Education	277	31.8	21.3	5.1	1.8	18.1	17.0	5.1	**58.1**
Anthropology	1,136	19.6	22.9	16.1	5.0	10.8	22.6	2.9	**58.6**
Fashion	189	25.9	19.0	13.8	9.5	13.2	17.5	1.1	**58.7**
Electrical Sound /Communication	167	22.8	28.1	8.4	0.0	13.8	16.8	10.2	**59.3**
Physical Science	165	21.2	20.0	18.2	7.3	9.7	23.0	0.6	**59.4**
Early Childhood Education	2,694	28.6	17.8	13.3	5.0	16.7	17.9	0.8	**59.6**
Music	1,936	34.7	15.6	9.2	4.2	14.8	20.5	0.9	**59.6**
Engineering	153	49.7	9.2	1.3	9.8	24.8	5.2	0.0	**60.1**
Art	2,573	28.4	20.8	11.6	4.7	14.4	18.2	1.9	**60.8**
Electronics Technology	628	28.5	17.7	15.1	4.1	21.8	10.5	2.2	**61.3**
Art New Media	122	29.5	22.1	9.8	4.1	19.7	13.9	0.8	**61.5**
Chemistry	805	12.7	21.7	27.2	5.6	10.2	20.9	1.7	**61.6**
Welding	709	35.8	13.3	12.7	6.5	23.0	7.8	1.0	**61.8**
Nursing	336	27.7	19.3	14.9	1.8	10.1	25.0	1.2	**61.9**
Automotive Technology	1,020	25.4	21.1	15.7	2.1	22.0	13.4	0.4	**62.2**
Speech Communication	1,049	21.1	29.4	12.7	3.6	10.8	21.2	1.3	**63.1**
Theatre Arts	1,276	32.8	18.7	11.8	4.9	11.1	19.4	1.3	**63.3**
Astronomy	233	23.2	21.0	19.3	4.7	10.3	21.5	0.0	**63.5**
Physical Education	7,919	47.9	9.8	6.1	1.9	9.7	24.3	0.2	**63.9**
Office Administration	1,238	20.9	30.4	12.8	2.0	7.5	25.8	0.6	**64.1**
Iron Workers	427	13.3	19.4	33.7	3.5	13.3	3.0	13.6	**66.5**
Sign Language Studies	772	19.7	15.3	32.1	1.8	10.5	19.6	1.0	**67.1**
Physics	222	16.7	32.0	20.3	5.4	9.5	16.2	0.0	**68.9**
Human Career Development	3,009	32.8	8.8	27.7	2.5	13.8	12.3	2.2	**69.3**
Design Technology	437	42.8	18.1	9.4	3.0	10.8	15.8	0.2	**70.3**
Family & Consumer Science	32	43.8	21.9	6.3	0.0	9.4	18.8	0.0	**71.9**
English As A Second Language	6,393	12.1	14.2	52.7	2.3	6.1	12.5	0.1	**79.0**
Carpentry	1,076	11.8	19.3	50.4	0.6	9.5	8.5	0.0	**81.5**
Electricians	432	10.9	17.6	53.9	0.0	5.1	10.4	2.1	**82.4**
Drywall/Lathing	711	23.6	22.4	43.7	5.9	3.5	0.0	0.8	**89.7**
Sheet Metal	268	1.5	31.7	57.1	0.7	3.0	4.5	1.5	**90.3**
Sheet Metal Technician	31	19.4	45.2	25.8	0.0	3.2	6.5	0.0	**90.3**
Gerontology	2,845	1.1	0.5	90.4	0.1	1.8	5.6	0.5	**92.0**
Student Government	7	85.7	14.3	0.0	0.0	0.0	0.0	0.0	**100.0**

Comment: Table 18 clearly shows what disciplines freshmen have difficulty with in their first semester at ARC. Of the 73 disciplines listed here, the 25th percentile is a success rate of 50.7%; the median or 50th percentile is 57.1%; and the success rate corresponding to the 75th percentile is 63.2%.

First Semester Freshmen Performance in Selected Courses

Table 19. First-semester Freshmen and Non-freshmen Success Rates in Courses (Ascending Order for Freshmen Success, Five Years).

Course		Freshmen Enrollment	Freshmen Success Rate	Non-Freshmen Enrollment	Non-Freshmen Success Rate
Financial Accounting	ACCT 001 A	291	**37.8**	3,986	**58.8**
History of Western Civilization	HIST 004	304	**38.8**	1,750	**51.6**
Introduction to Logic	PHIL 004	271	**41.0**	2,811	**58.4**
Introduction to Business	BUS 020	526	**42.4**	2,769	**61.8**
History of the United States	HIST 017	1,022	**42.7**	4,851	**49.1**
Reading Center: Basic Skills	ENGL 268	1,455	**43.4**	2,427	**47.8**
College Writing	ENGL 058	3,663	**43.9**	7,285	**40.6**
Elementary Algebra	MATH 051	2,564	**44.7**	8,123	**49.2**
The Foundations of Biology	BIOL 012	434	**44.7**	3,168	**57.7**
Introductory Sociology	SOC 001 A	660	**46.1**	3,851	**64.5**
Principles of Economics	ECON 001 A	607	**46.5**	5,801	**57.6**
Physical Anthropology	ANTH 001	447	**47.4**	4,131	**65.6**
Writing Center: Basic Skills	ENGL 254	999	**47.4**	3,981	**55.0**
Nutrition	NUTRI 010	290	**47.6**	1,805	**62.8**
History of the United States	HIST 018	796	**48.4**	4,053	**61.8**
Developmental Writing	ENGL 256	1,770	**48.9**	2,107	**53.8**
General Biology	BIOL 016	270	**49.3**	2,462	**67.5**
Human Sexuality	PSYC 025	1,606	**50.0**	6,132	**61.0**
Elementary Spanish	SPAN 001 A	430	**50.0**	3,933	**64.8**
Intro: Computer Information Science	C I S 003	1,041	**50.4**	5,010	**63.4**
Basic Reading Skills	ENGL 270	1,241	**50.4**	1,038	**52.1**
Basic Arithmetic	MATH 205	1,710	**50.9**	3,759	**62.9**
Computer Familiarization	C I S 001	2,520	**52.2**	9,659	**66.2**
Efficient Reading	ENGL 071	1,194	**52.3**	1,770	**57.9**
History of the Film	T A 004	305	**53.8**	1,989	**74.3**
Intro to Government: United States	POL S 001	877	**54.3**	9,696	**62.8**
Intermediate Algebra	MATH 053	1,734	**54.3**	7,699	**56.5**
Elements of Physical Geography	GEOG 001	389	**55.0**	3,557	**65.7**
Introduction to Philosophy	PHIL 006	258	**55.4**	1,827	**67.0**
Beginning Word-processing	C I S 011 A	476	**55.5**	4,601	**76.9**
Pre-Algebra Mathematics	MATH 210	878	**55.7**	2,766	**66.6**
Trigonometry	MATH 015	588	**56.1**	2,919	**52.6**
Intro to Early Childhood Education	E C E 001	589	**56.4**	2,022	**65.3**
Elementary Drawing and Composition	ART 011 A	483	**56.9**	1,686	**67.7**
Health Science	HE ED 001	567	**57.0**	2,603	**64.1**
Beginning Piano	MUIVI 030 A	321	**57.3**	1,435	**62.0**

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Table 19 (continued)

Course		Freshmen Enrollment	Freshmen Success Rate	Non-Freshmen Enrollment	Non-Freshmen Success Rate
Pre-Algebra B	MATH 210 B	262	57.3	732	62.3
Pre-Algebra A	MATH 210 A	450	57.6	910	63.0
Reading Center: College Skills	ENGL 068	471	57.7	1,305	58.6
General Principles	PSYC 001	2,695	57.8	7,232	61.8
Child Development	E C E 034	903	58.1	2,874	64.2
College Composition	ENGL 001 A	3,732	59.2	13,398	60.3
Electronic Spreadsheet	C I S 012 A	349	59.6	4,878	79.4
Pre-Calculus Mathematics	MATH 029	428	59.6	1,652	62.2
Basic Automotive Service	A T 053	418	59.6	616	66.9
Design Fundamentals	ART 014	305	60.0	1,056	69.2
Introduction to Art	ART 010	758	60.0	4,914	73.8
Magic, Witchcraft and Religion	ANTH 012	255	60.0	1,448	71.5
American Sign Language 1	SI LA 001	478	60.3	2,886	70.8
Women in American History	HIST 016 W	398	60.6	5,627	78.6
Applied Psychological Principles	PSYC 020	666	60.8	1,678	71.6
Introduction to Music	MUFHL 006	458	60.9	3,007	76.9
Child Development	PSYC 034	653	61.3	1,966	68.4
Physical Education	PE R 001	6,738	61.6	36,468	70.6
Introduction to Chemistry	CHEM 002 A	321	61.7	2,592	71.9
Speech Communication	SPEE 001	633	62.1	5,803	75.2
Health & Safety/Child Care Settings	E C E 013	266	62.8	1,332	71.7
Intro to Probability & Statistics	STAT 001	495	63.2	7,941	66.3
Career Exploration	C G 010	878	64.6	2,745	75.2
Operating Systems	C I S 014 A	437	65.0	5,974	79.1
Analytic Geometry and Calculus I	MATH 009 A	393	65.4	2,085	60.0
College Success/Study Skills	C G 052	443	65.5	692	69.1
Theory and Techniques of Acting	T A 015 A	536	65.9	1,575	67.8
Beginning Keyboarding/Applications	BUS 001	960	67.7	3,950	73.0
Group Discussion	SPEE 015	315	69.5	4,818	81.5
Work Experience in CARPT	CARPT 098	567	69.7	2,088	65.8
Cultural Anthropology	ANTH 002	364	69.8	2,723	78.1
College Athletics	PE R 004	599	74.1	1,551	84.5
Work Exp: Electricians Apprentice	ELECT 098	252	76.2	1,111	90.1
Intermediate-Mid Listening & Speaking	ESL 280 L	270	77.4	853	83.5
English as a Second Language Center	ESL 265	769	78.8	1,912	83.9
Spec Studies/Counseling & Guidance	C G 099	398	79.4	1,092	83.3
Intermediate - Low Writing	ESL 270 W	617	80.1	716	72.1
Intermediate-Low Reading	ESL 270 R	721	85.3	679	82.6
Intmed. Low Listening & Speaking	ESL 270 L	639	86.9	575	82.3

Comment: Table 19 should prove very useful to counselors who must develop an educational plan for new freshmen. The 75 courses listed here can be divided into quartiles of difficulty for new freshmen. The first quartile (up to 25th percentile) corresponds to a success rate of 50%. The next ordered success rates (up to 50th percentile) corresponds to a success rate of 57.6%. The third quartile (up to 75th percentile) is 62.8%. All success rates above 62.8% fall in the top quartile. Courses falling beneath a 57.6% success rate (50th percentile) should be carefully considered when providing information to new freshmen.

Summary of Freshmen Academic Performance Section

- Freshmen, both recent high school graduates and other freshmen, have increased their success rates from five years ago, but they are still the most at-risk group in terms of their current overall success rates (60% compared with 70% for non-freshmen).
- The freshmen success rate varies with: gender (females higher), ethnicity (Asian and white students higher), and age (<18 and 30+ higher).
- Freshmen students whose primary language is not English have the highest success rate.
- For freshmen students, the success rate also varies with: stated goal (obtain a degree higher), income ($15,000 + higher), load (full-time higher), and course level (apprenticeship higher).
- The five highest first-semester success rates are for recent graduates of the following high schools: St. Francis Girls, Ponderosa, Oak Ridge, Christian Brothers, and Casa Robles (five-school average, 71%). Five high schools producing the lowest success rates during the first ARC semester are: Grant Union, Johnson Main, Rio Linda, Sacramento, and Encina (five-school average, 51%).
- ARC instructional areas which produce the highest freshmen success rates: Technical Education, Humanities, Counseling, and Physical Education. The lowest instructional areas are Work Study, English, Math / Engineering, and Fire Technology.
- First-semester freshmen success rates organized by academic disciplines range from a low of 32.4% to a high of 100%.
- First-semester freshmen success rates organized by course range from 37.8% to 86.9%.

Implications for Planning

1. Establish a goal to raise freshmen first-semester success by +10%.
2. Determine why freshmen do poorly in specific courses, particularly English and math.
3. Place even greater emphasis upon proven techniques for course success (e.g., Beacon & student services), and further search for other support techniques in order to increase the freshmen success rate in courses taken during the first semester.

Student Performance in Subsequent Courses

To what extent do students in a basic skill course progress to the next higher-level course? Next, how do they perform? These are the questions answered within this section. Also found are the overall normative success rates.

English 256 to English 58

Normative 5-year data

Success rate English 256 = 51.5% based upon 3,877 grade notations
Success rate English 58 = 41.7% based upon 10,948 grade notations

Conditions for this analysis

1. New freshmen students who enrolled during fall 1996 or fall 1997.
2. Student enrollment in both English 256 and English 58
3. Time allowed for enrollment in both courses = 4 years.
4. Last grade of record used for both courses.
5. Total number of students this analyses = 230

English 256	English 58		
	Unsuccessful	Successful	
Successful (n = 201)	117 (58.2%)	84 (41.8%)	100%
Unsuccessful (n = 29)	22 (75.9%)	7 (24.1%)	100%
Totals	139 (60.4%)	91 (39.6%)	100%

Starting cohort English 256 through all levels to transfer level English

English 256	English 58	English 1A
100%	38.9%	15.9%
n = 591	n = 230	n = 94

Note: These are enrollments in target courses based upon the same set of conditions noted above.

Comment: The successful performance of former English 256 students with the subsequent English 58 course is no different from the normative data, 41.8% versus 41.7% for the norm. However, the students who did enter English 58 enjoyed an 87.4% success rate in their English 256 experience (computation: 201/230). What this suggests is that successful English 256 students fare no better in English 58 than students who enter directly into English 58. The enrollment progression from English 256 to higher-level courses (i.e., English 58 and English 1A) shows that within a four-year period of opportunity, 38.9% had enrolled in English 58 while only 15.9% reached English 1A.

English 58 to English 1A

Normative Five-year data

Success rate English 58 = 41.7% based upon 10,948 grade notations
Success rate English 1A = 60.1% based upon 17,130 grade notations

Conditions for this analysis

1. New freshmen students who enrolled during fall 1996 or fall 1997.
2. Student enrollment in both English 58 and English 1A.
3. Time allowed for enrollment in both courses = 4 years.
4. Last grade of record used for both courses.
5. Total number of students this analyses = 737.

English 58	English 1A		
	Unsuccessful	Successful	
Successful (n = 623)	127 (20.4%)	496 (79.6%)	100%
Unsuccessful (n = 114)	34 (29.8%)	80 (70.2%)	100%
Totals	161 (21.8%)	576 (78.2%)	100%

Starting cohort English 58 to transfer level English

English 58	English 1A
100%	45.1%
n = 1,636	n = 737

Note: These are enrollments in target courses based upon the same set of conditions noted above.

Comment: The success rate of former English 58 students in the subsequent English 1A course is quite high, 79.6%. This is certainly a favorable outcome. Yet one could also make the claim that the students who progressed to English 1A were the best in the English 58 course having enjoyed an 84.5% success rate in that course which far exceeds the English 58 norm (computation: 623/737). It is interesting that the unsuccessful students in English 58 who somehow managed to enroll in English 1A also had a high success rate of 70.2%. The progression rate from English 58 to English 1A is 45.1% given four years of opportunity.

Math 205/210 to Math 51

Normative Five-year data

Success rate Math 205/210 = 59.8% based upon 7,823 grade notations
Success rate Math 51 = 48.1% based upon 10,687 grade notations

Conditions for this analysis

1. New freshmen students who enrolled during fall 1996 or fall 1997.
2. Student enrollment in both Math 205/210 and Math 51.
3. Time allowed for enrollment in both courses = 4 years.
4. Last grade of record used for both courses.
5. Total number of students this analyses = 688.

Math 205/210	Math 51		
	Unsuccessful	Successful	
Successful (n = 660)	237 (35.9%)	423 (64.1%)	100%
Unsuccessful (n = 28)	20 (71.4%)	8 (28.6%)	100%
Totals	257 (37.4%)	431 (62.6%)	100%

Starting cohort math 51 through all levels to any transfer level math.

Math 205/210	Math 51	Math 53	Any Transfer Level Math
100%	37.5%	11.7%	6.7%
n = 1,837	n = 688	n = 215	n = 123

Note: These are enrollments in target courses based upon the same set of conditions noted above.

Comment: Admittedly, the Math 205/210 is putting together different courses. The justification is that these course levels all fall below beginning algebra. Note that the normative success rate for this collection of courses is 59.8%. Yet the students in a 205/210 course who also enrolled in Math 51 had considerable success with the 205/210 courses, 95.9% (computation: 660/688). So the best of the 205/210 cohort also produced a 64.1% success rate in Math 51. That, too, exceeds the norm figure for Math 51, at 48.1%. In terms of enrollment progression, 37.5% of the 205/210 students progressed to Math 51, 11.7% entered Math 53, and only 6.7% of the Math 205/210 cohort got as far as a transfer level math course.

Math 51 to Math 53

Normative Five-year data

Success rate Math 51 = 48.1% based upon 10,687 grade notations
Success rate Math 53 = 56.1% based upon 9,433 grade notations

Conditions for this analysis

1. New freshmen students who enrolled during fall 1996 or fall 1997.
2. Student enrollment in both Math 51 and Math 53.
3. Time allowed for enrollment in both courses = 4 years.
4. Last grade of record used for both courses.
5. Total number of students this analyses = 657.

Math 51	Math 53		
	Unsuccessful	Successful	
Successful (n = 619)	136 (22.0%)	483 (78.0%)	100%
Unsuccessful (n = 38)	22 (57.9%)	16 (42.1%)	100%
Totals	158 (24.0%)	499 (76.0%)	100%

Starting cohort math 51 through all levels to any transfer level math.

Math 51	Math 53	Any Transfer Level Math
100%	43.3%	29.9%
n = 1,516	n = 657	n = 423

Note: These are enrollments in target courses based upon the same set of conditions noted above.

Comment: Once again we see that the great of majority of students in Math 51 who progress are very successful in the base course, a 94.2% rate (computation: 619/657). The 94.2% greatly exceeds the norm of 48.1% for that course. In addition, the Math 51 cohort was quite successful in Math 53 (78%) also exceeding the norm for Math 53 at 56.1%. With respect to enrollment progression, of the Math 51 cohort, 43.3% enrolled in Math 53 while 29.9% reached a transfer level math course.

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Math 53 to Any Transfer Level Math

Normative Five-year data

Success rate Math 53 = 56.1% based upon 9,433 grade notations
Success rate any transfer level math = 65.3% based upon 22,395 grade notations

Conditions for this analysis

1. New freshmen students who enrolled during fall 1996 or fall 1997.
2. Student enrollment in both Math 53 and any transfer level math.
3. Time allowed for enrollment in both courses = 4 years.
4. Last grade of record used for both courses.
5. Total number of students this analyses = 904.

Math 53	Any Transfer Level Math		
	Unsuccessful	Successful	
Successful (n = 840)	195 (23.2%)	645 (76.8%)	100%
Unsuccessful (n = 64)	27 (42.2%)	37 (57.8%)	100%
Totals	222 (24.6%)	682 (75.4%)	100%

Starting cohort math 53 to transfer level math.

Math 53	Any Transfer Level Math
100.0%	66.5%
n = 1,359	n = 904

Note: These are enrollments in target courses based upon the same set of conditions noted above.

Comment: Students who enrolled in both courses produced very high success rates. For example, while the norm value for success in Math 53 is 56.1%, the students who progressed had a 92.9% (computation: 840/904) in Math 53. They also had a 76.8% success rate in a transfer level math course. It is understood that “any transfer level math course” can mean a lot of very diverse courses. Yet the norm for the collection of transfer courses is 65.3%, substantially lower than the success rate of the Math 53 cohort. The rate of progression from Math 53 to a transfer level math course within four years is 66.5%.

Summary of Subsequent Courses Section

- The progression rate from English 256 to being successful in English 58 is low, 41.8%. Yet the progression from English 58 to being successful in English 1A is very high, 79.6%.
- Of the students who started in English 256, 15.9% of them enrolled in English 1A within a period of four years. And the students who started in English 58, 45.1% of them enrolled in English 1A within four years.
- The progression from Math 205/210 to being successful in Math 51 (elementary algebra) is 64.1%. The progression from Math 51 to being successful in Math 53 (intermediate algebra) is high, 78.0%. And the progression from Math 53 to experiencing success in a transfer level math course is also very high, 76.8%.
- For students who started in Math 205/210, only 6.7% had enrolled in a transfer level math course given four years of opportunity. For the students who started in Math 51, some 29.9% had enrolled in a transfer level math course within four years. Lastly, for students who started with Math 53, 66.5% had enrolled in a transfer level math course within four years.

Implications for Planning

1. For students starting in the lowest levels of English or math, it takes 2-4 semesters of coursework to reach transfer levels. Consider a fast-track or "submersion" experience for these students in order to reach the transfer course within a shorter time span.
2. English 58 appears to be a very difficult course for students regardless of previous coursework. Develop strategies by which students can be more successful in that course. Either the students are not prepared for the 58 experience, or the pedagogy and grading standards are designed to prevent nearly 60% of enrollees from being successful.

Measuring Persistence Through Benchmark Achievements

> ***Freshmen have always been a reference group for determining base rates of getting through an academic institution and beyond. When the achievement rates are not favorable, ARC feels compelled to act upon it, because it is known that freshmen are an at-risk group. They drop out of the system much too often.***

The usual measure of persistence is really a weak measure. Traditionally, it is measured by computing the percentage of new freshmen that continue their enrollment through subsequent semesters. American River College has typically had a 60% rate of freshmen enrolling in fall and continuing to the immediate spring semester. That means that 40% do not show up for the subsequent spring semester. After that the persistence percentages trail off even further over a period of four years.

To refine and gather more information about persistence, we have created several checkpoints called benchmarks of achievement. These benchmarks are: completed 6 units, 15 units, 30 units, 45 units, and 60 units. Also included are: having received a certificate, an associate degree, or reached transfer ready status (56+ transfer units, 2.0+ GPA, completion of English 1A and a transfer math or statistics course).

We prefer benchmarks of achievement because a student cannot accomplish them without also persisting. Thus we get both measures rolled into one. Any student cohort that can be isolated can also be run through the achievement benchmarks programming. Students in special educational programs can be examined for their subsequent achievements. For example, students who have been contacted through an early alert process can be compared with similar students not contacted as to their rates on the benchmarks. In this report, we shall focus mostly upon the demographics of students. All of these freshmen initially enrolled during a fall semester and were given exactly four years to reach the various benchmarks. We were also able to combine the outcomes of two starting fall groups thereby increasing the sample size.

Overall Freshmen Benchmarks of Achievement

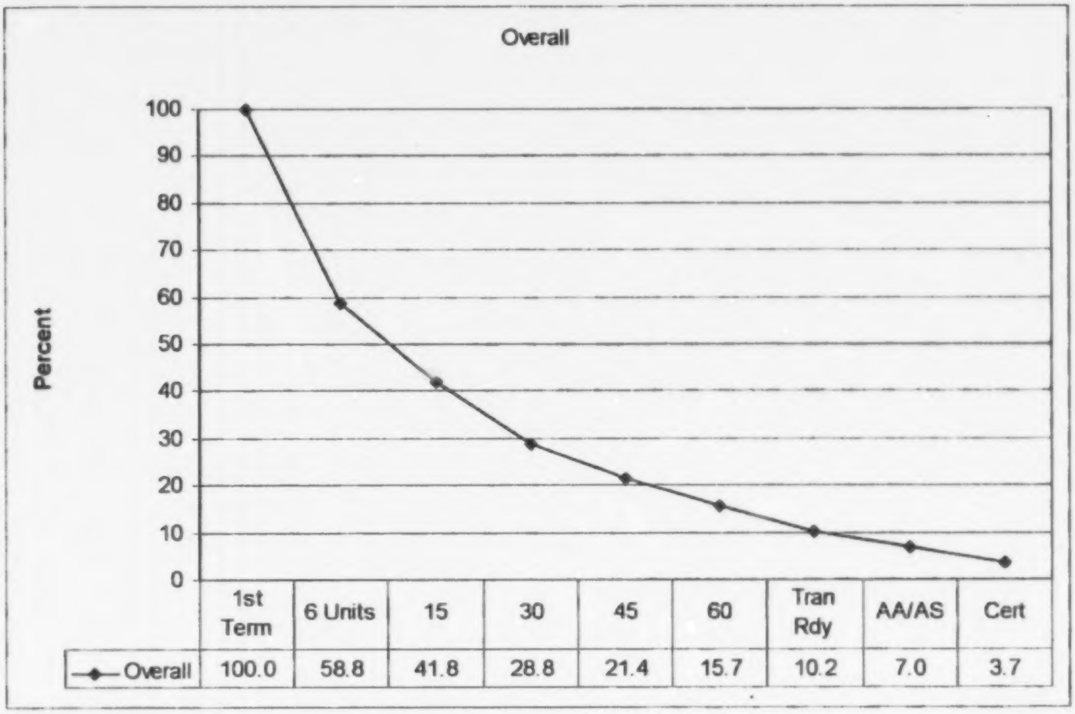
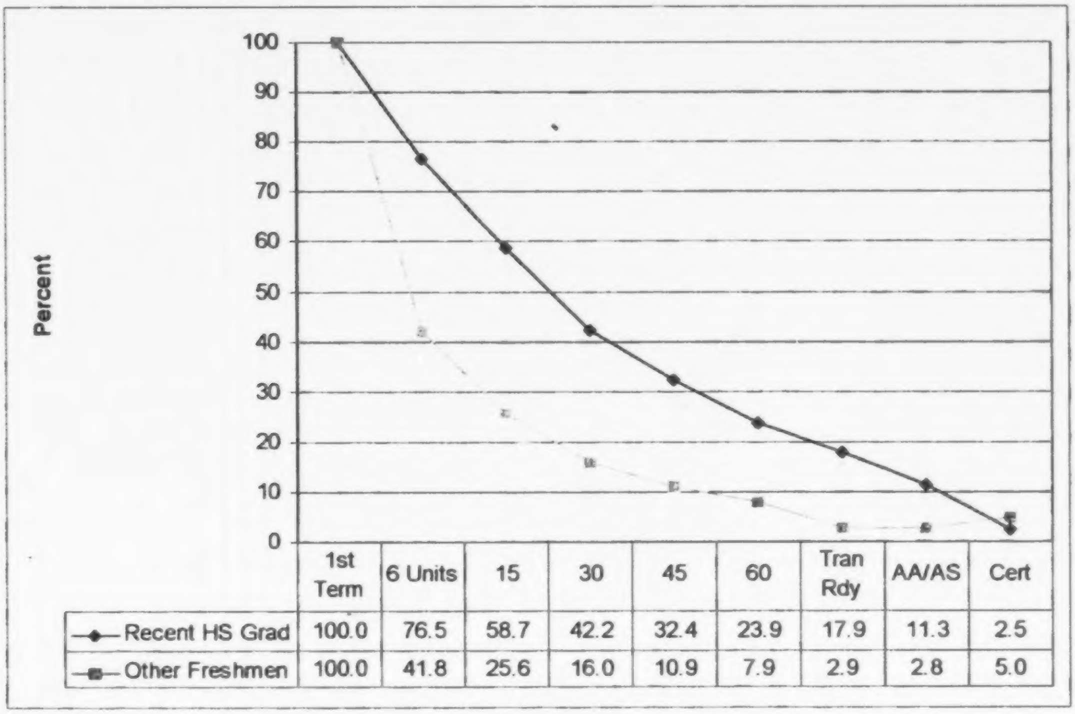


Figure 27. Freshmen Benchmark Achievements Given Four Years From Initial Enrollment.

Comment: All new 8,260 ARC freshmen from fall semesters of 1996 and 1997 were made equal to 100% their first term. Of that group, 58.8% completed 6 units within four years. That also means that 41.2% never got that far in four years, at least not at ARC. Of the initial group, 41.8% had earned 15 units. Then 28.8% of the freshmen reached at least 30 units. Only 10.2% became ready to transfer, and only 7% had earned an associate degree from ARC given four years. Note the discrepancy between the rates of earning 60 units and receiving a degree. The transfer ready percentage is not the same as the transfer ready rate. The value here is simply the number of students completing 54+ units of transfer work and completing English 1A and a transfer level math course. In the last ARC institutional effectiveness report (March 1999), the various achievements were: 6 units (60.6%), 15 units (41.0%), 30 units (29.0%), 45 units (21.1%), 60 units (14.7%), transfer ready (10.0%), an associate degree (5.6%), and a certificate (1.7%). The various rates in this report compared with the rates in the last report are quite similar, perhaps a little better this time. The ultimate goal is to level out the curve, i.e., more rectangular from the start.

Benchmarks of Achievement for Recent High School Graduates and Other Freshmen

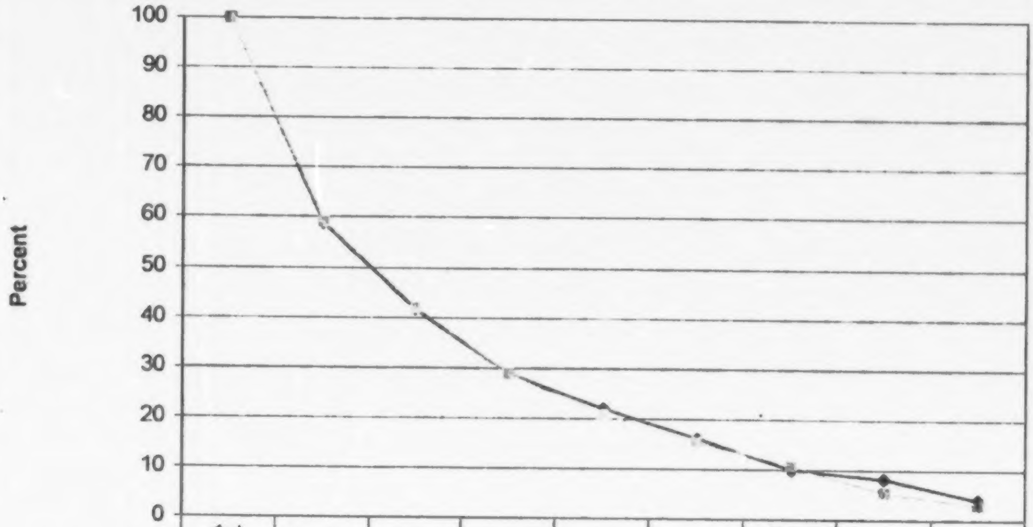


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
—◆— Recent HS Grad	100.0	76.5	58.7	42.2	32.4	23.9	17.9	11.3	2.5
—■— Other Freshmen	100.0	41.8	25.6	16.0	10.9	7.9	2.9	2.8	5.0

Figure 28. Benchmark Achievements for Recent High School Graduates and Other Freshmen.

Comment: Given four years of opportunity, recent high school graduates proceed through the various levels of achievement at relatively high rates. In past analyses for other reports, all new freshmen were treated as one group. The breakout here shows that it is wise to consider two types of freshmen.

Benchmarks of Achievement for Female and Male Freshmen

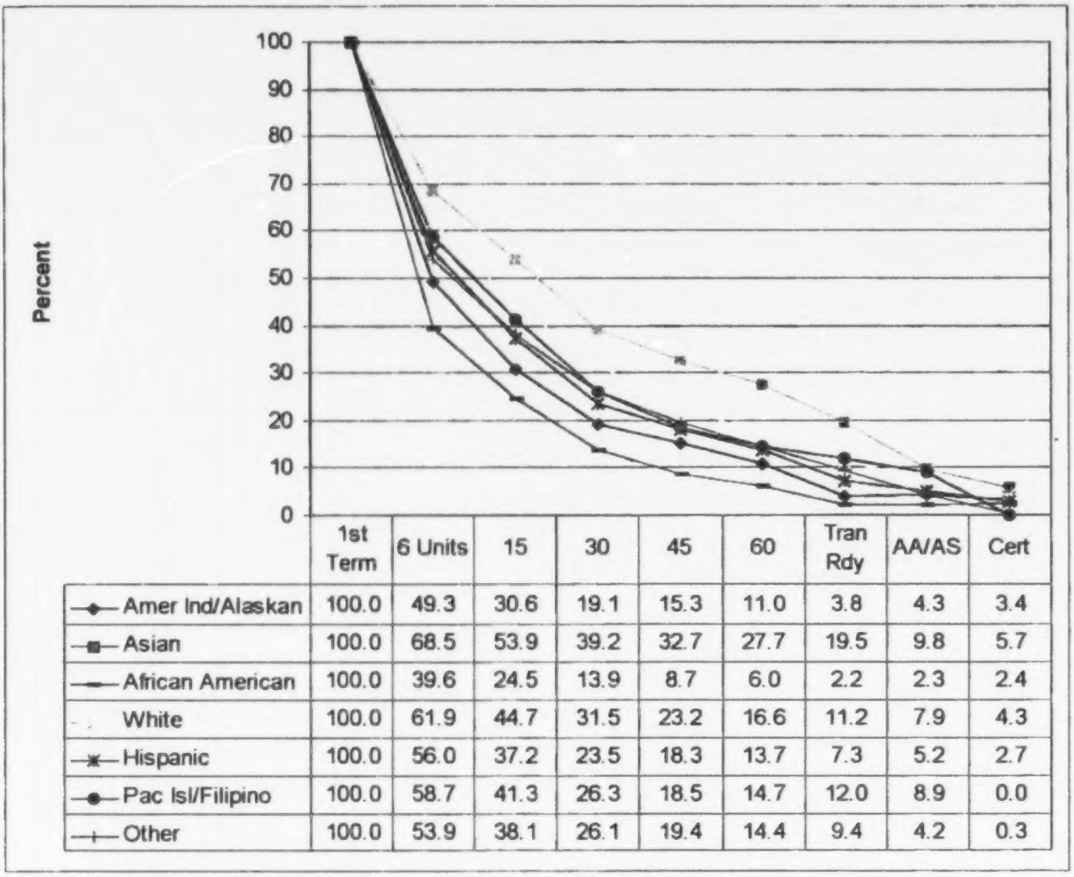


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
—◆— Female	100.0	58.7	41.7	28.9	21.9	16.0	10.0	8.3	4.2
—□— Male	100.0	59.0	42.0	28.7	20.8	15.4	10.6	5.5	3.2

Figure 29. Male and Female Freshmen Benchmark Achievements Given Four Years From Initial Enrollment.

__Comment:__ The two curves are nearly identical with the exception of the associate degree. It prompts the question of whether ARC female students place more value on the associate degree than males? Overall, the curve suggests that there are only small differences between the sexes.

Benchmarks of Achievement by Freshmen Ethnicity

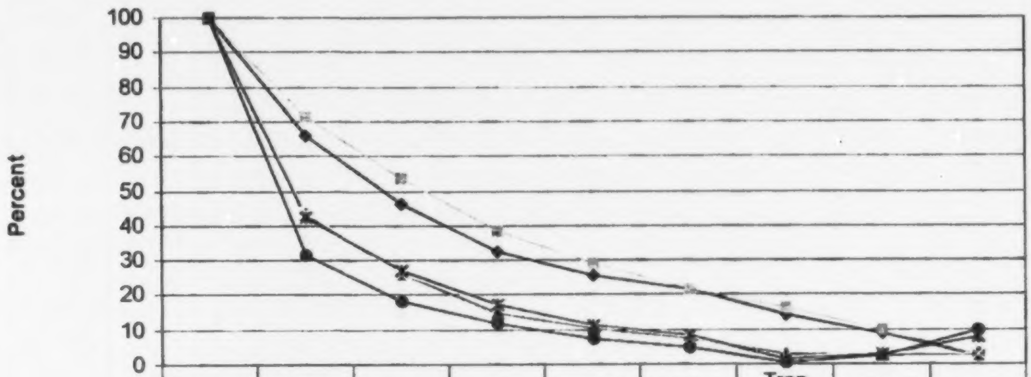


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
◆ Amer Ind/Alaskan	100.0	49.3	30.6	19.1	15.3	11.0	3.8	4.3	3.4
■ Asian	100.0	68.5	53.9	39.2	32.7	27.7	19.5	9.8	5.7
— African American	100.0	39.6	24.5	13.9	8.7	6.0	2.2	2.3	2.4
White	100.0	61.9	44.7	31.5	23.2	16.6	11.2	7.9	4.3
✱ Hispanic	100.0	56.0	37.2	23.5	18.3	13.7	7.3	5.2	2.7
● Pac Isl/Filipino	100.0	58.7	41.3	26.3	18.5	14.7	12.0	8.9	0.0
+ Other	100.0	53.9	38.1	26.1	19.4	14.4	9.4	4.2	0.3

Figure 30. Benchmark Achievements of Freshmen by Ethnic Grouping.

Comment: Unfortunately, the curves are not the same indicating that the student equity goal is far from being reached. The highest achieving student group across all benchmarks is Asian. Following them are white students with achievements across most of the categories until transfer ready, degrees, and certificates. Filipino and Pacific Islander students fill in the second highest across transfer ready and degrees, but no certificates. Because most of the benchmarks are linear (transfer ready and certificates are not), the first category of 6 units explains much of what follows. For example, 39.6% of African American freshmen complete no more than 6 units in four years. Given that, every benchmark that follows will be lower for them. If the overall rate of completing 6 units is about 59%, then any ethnic group below that mark needs some type of intervention provided that such a group indicates a goal that would normally exceed more than 6 units.

Benchmarks of Achievement by Freshmen Age Groups

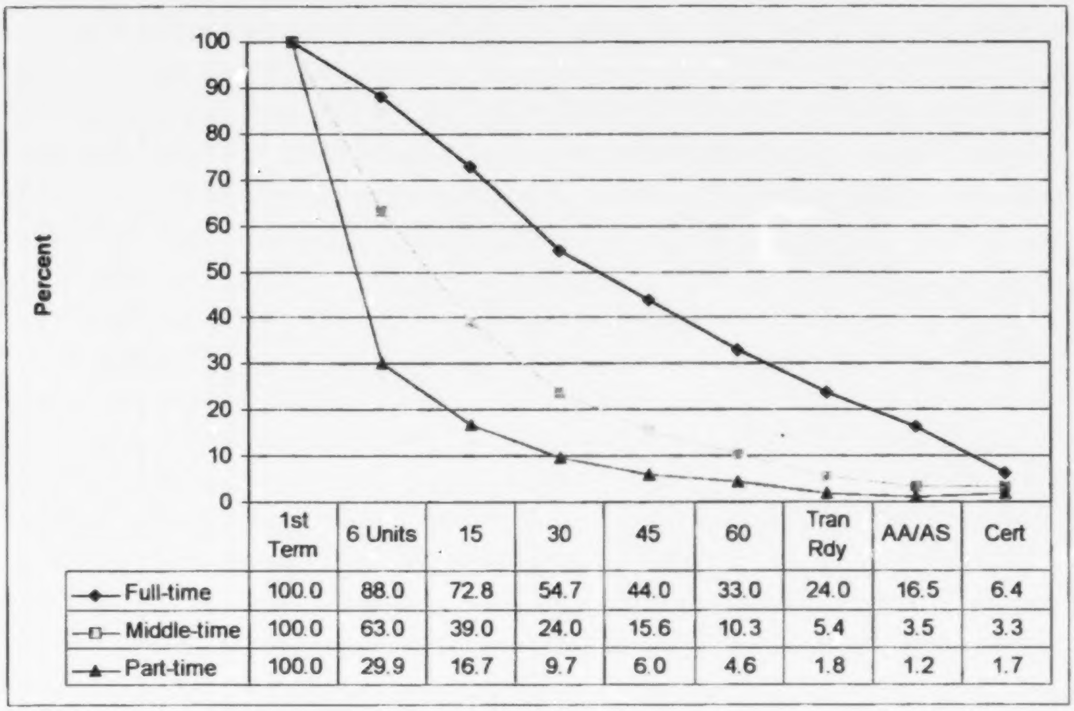


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
◆ <18	100.0	66.2	46.5	32.3	25.4	21.5	14.2	8.9	2.3
■ 18-20	100.0	71.4	53.9	38.3	29.3	21.5	16.1	9.9	2.4
▲ 21-24	100.0	43.3	25.9	14.9	10.5	7.4	2.9	2.4	2.8
25-29	100.0	43.9	25.9	17.0	11.4	7.7	2.1	3.3	3.1
✱ 30-39	100.0	42.2	27.1	17.2	11.1	8.1	1.4	2.8	7.8
● 40+	100.0	31.6	18.2	11.6	7.3	5.2	0.4	2.2	9.6

Figure 31. Benchmark Achievements of Freshmen by Age Grouping.

Comment: As expected, the 18-20 age group followed by the <18 age group seem to stand alone as the highest benchmark achievers at ARC. Of course the goals of other age groups may suggest something short of earning 60 units. It is known that the 30-39 and 40+ age groups have the highest success rates. Therefore, their goals would be reached short of earning 60 units, or their pace (load) is substantially slower than the youngest ARC students. The next graph examines load.

Benchmarks of Achievement by Freshmen Load Status

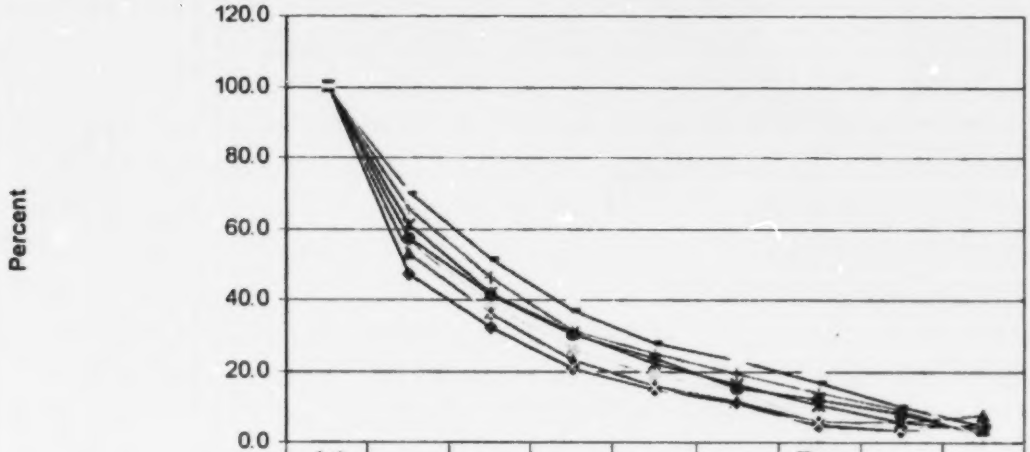


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
◆ Full-time	100.0	88.0	72.8	54.7	44.0	33.0	24.0	16.5	6.4
□ Middle-time	100.0	63.0	39.0	24.0	15.6	10.3	5.4	3.5	3.3
▲ Part-time	100.0	29.9	16.7	9.7	6.0	4.6	1.8	1.2	1.7

Figure 32. Benchmark Achievements of Freshmen by Load at End of First Semester.

Comment: The initial full-time student is expected to complete more units in a shorter amount of time than middle or part-time students. Looking at this variable suggests that there is a considerable difference between the rates of achieving 60 units versus earning a degree. For the full-time student, there is a loss of 55% between earning 6 units and earning 60 during the four years allowed in the model. For the middle-time, the reduction is 52.7%. For the part-time, the loss is 25.3%.

Persistence/Achievement by Freshmen Self-Reported Income

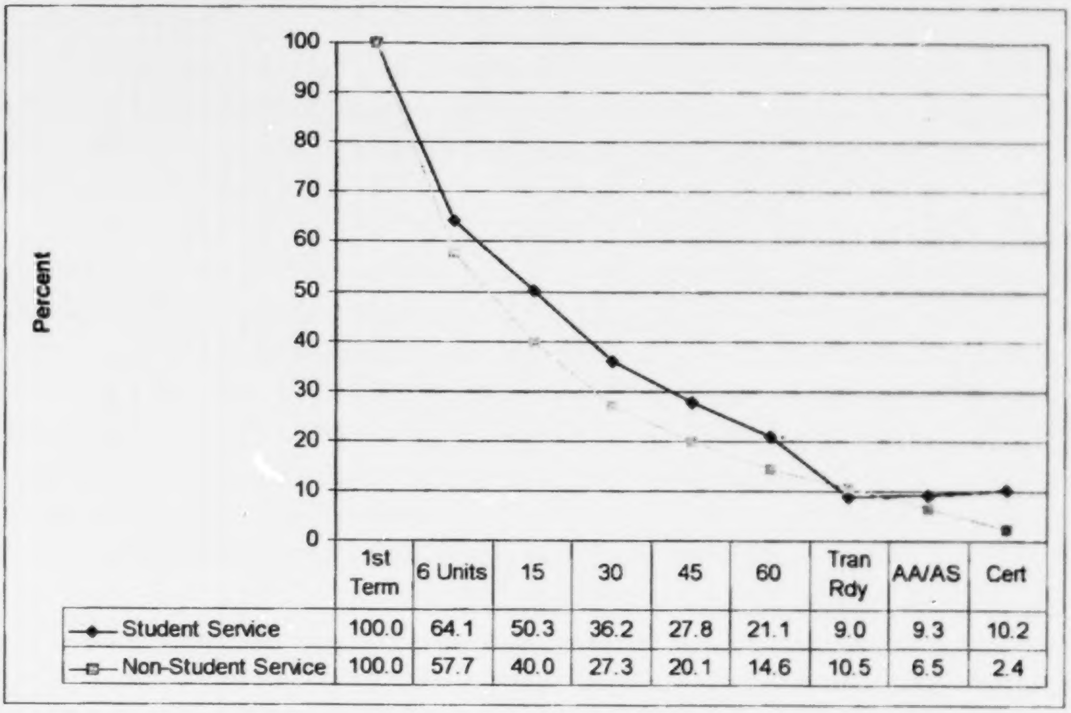


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
◆ Less Than $7,500	100.0	47.1	32.5	20.9	15.1	11.2	4.8	3.4	5.2
■ $7,500-$9,999	100.0	56.4	38.9	26.0	19.0	15.1	5.2	4.5	5.0
▲ $10,000-$14,999	100.0	53.2	36.0	23.0	16.1	11.4	5.8	5.6	7.9
$15,000-$19,999	100.0	56.3	35.7	21.1	15.5	9.1	5.6	4.0	4.3
✱ $20,000-$24,999	100.0	61.1	42.2	30.9	22.4	16.4	10.6	5.8	3.8
● $25,000-$29-999	100.0	57.4	41.4	30.5	23.4	15.3	12.1	8.4	2.2
+ $30,000-$34,999	100.0	65.5	46.4	31.1	25.2	19.5	14.0	9.3	1.9
— $35,000-$39,999	100.0	70.3	51.5	37.1	28.1	23.2	16.9	10.4	4.9
○ $40,000 or More	100.0	71.5	55.0	40.5	31.3	23.1	19.2	12.5	1.2

Figure 33. Benchmark Achievements of Freshmen by Self Reported Income as of First Enrollment.

Comment: If one examines only two benchmarks, 30 and 60 units, the higher income levels also show the highest achievement levels. For example, the $35,000 and $40,000 income levels had the highest completion rates at both 30 and 60 units.

Benchmarks of Achievement by Freshmen In a Student Service

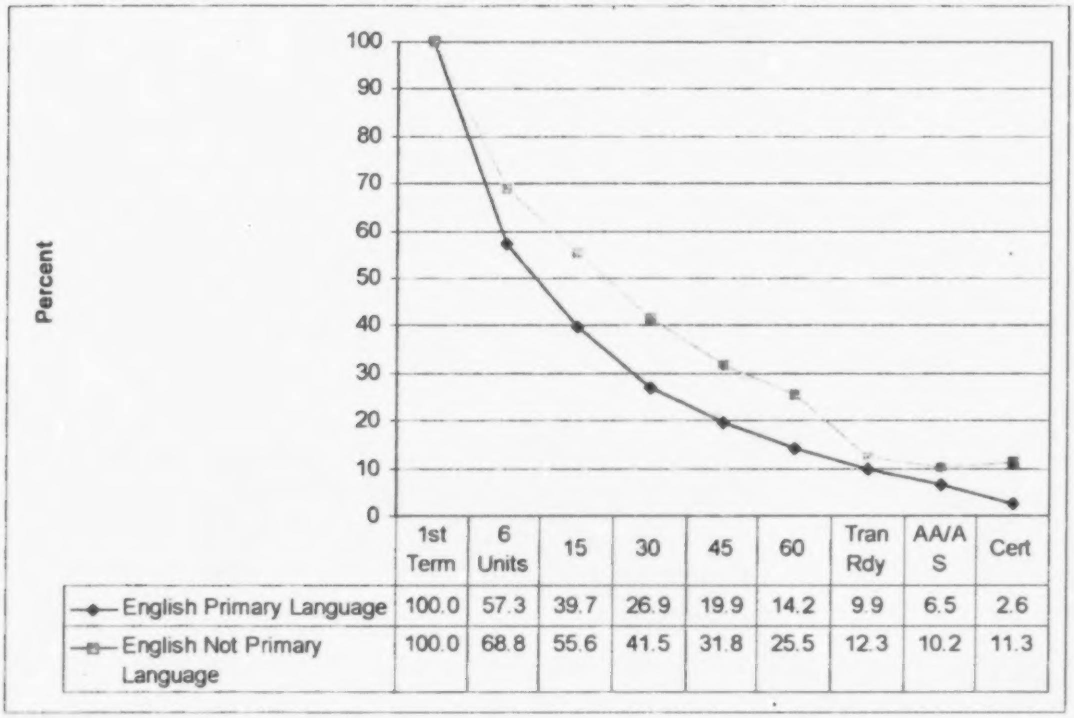


	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
—◆— Student Service	100.0	64.1	50.3	36.2	27.8	21.1	9.0	9.3	10.2
—□— Non-Student Service	100.0	57.7	40.0	27.3	20.1	14.6	10.5	6.5	2.4

Figure 34. Benchmark Achievements of Freshmen Belonging to a Student Service.

__Comment:__ The graph suggests that freshmen in a student service outperform the non-service freshmen on seven of the eight benchmarks. This finding is consistent with other analyses of the student service groups. The student service groups collectively represented here are those freshmen who were actively participating in one or more of the following groups: EOPS, DSPS, LD, PACE, MESA, CalWORKs, financial aid or athletes.

Benchmarks of Achievement by Freshmen In ESL



	1st Term	6 Units	15	30	45	60	Tran Rdy	AA/AS	Cert
—◆— English Primary Language	100.0	57.3	39.7	26.9	19.9	14.2	9.9	6.5	2.6
—■— English Not Primary Language	100.0	68.8	55.6	41.5	31.8	25.5	12.3	10.2	11.3

Figure 35. Benchmark Achievements of Freshmen Designated as ESL and Non-ESL.

Comment: As with other analyses of ESL students, this graph also supports findings suggesting that ESL students academically outperform all other ARC students.

Summary for Benchmarks of Achievement Section

- The benchmarks offer a longitudinal look at the various educational achievements of freshmen. Only 58.8% complete 6 units within four years of opportunity. The rates get substantially lower over time. Of the starting freshmen group, 15.7% complete 60 units of coursework, and only 7% earn an associate degree. The various benchmark rates found in the last institutional report are very similar.

- The discrepancy between the rates of earning 60 units (15.7%) and receiving an associate degree (7%) is likely to be either a lack of interest or a failure to complete all the associate degree requirements. In the last institutional report, the same phenomenon was reported (14.7% versus 5.6%).

- The benchmark rates are nearly identical for males and females. The highest benchmark rates are associated with: being Asian or white, being 20 years of age or less, and carrying full-time loads – at least during the first semester of attendance

- Self-reported incomes relate to higher benchmark rates, as does being affiliated with a student service, or being an ESL student.

Implications for Planning

1. The present method of tracking student progress, the benchmarks of achievement, would seem to be the best analysis for determining long-term effectiveness of an instructional treatment. Consider adding this component to at least some instructional program reviews.

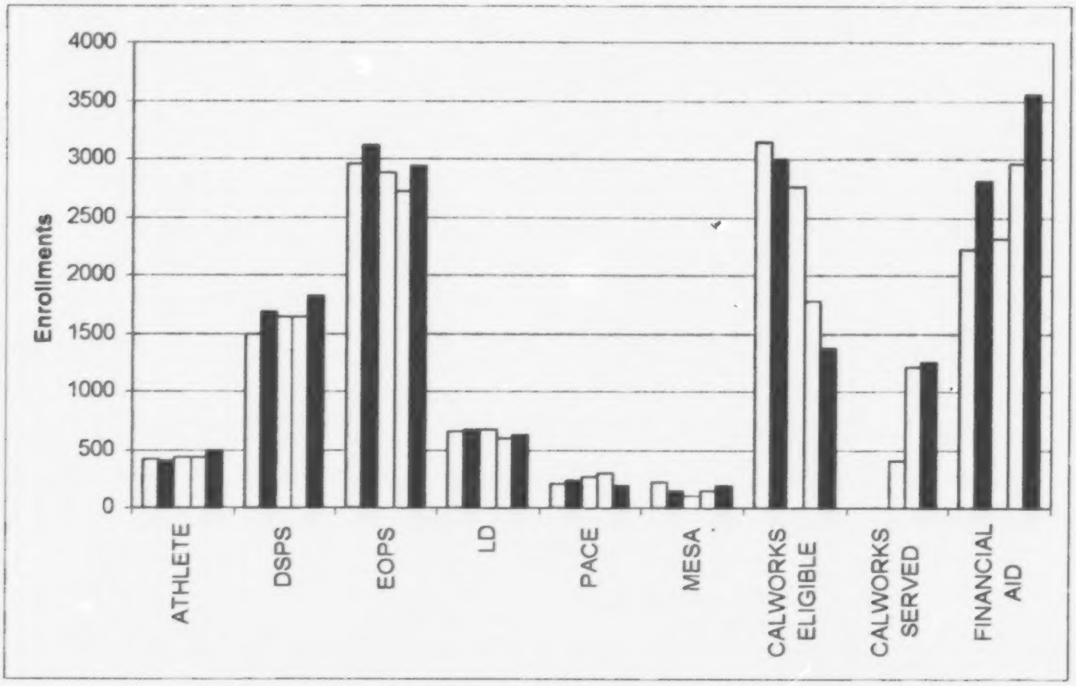
2. Incorporate the benchmarks into other aspects of evaluation. For example, benchmarks could be used with certain starting cohorts, e.g., recent high school graduates from a specific high school, or students enrolled in a vocational program.

3. Develop strategies for improving the various benchmark rates, especially the discrepancy between earning 60 units and receiving the associate degree.

Student Service Groups

In the last Institutional Effectiveness Report we indicated that students who belonged to at least one of the student services on campus outperformed students not connected with any service. Here we double-check the findings by again examining the performances of the student service groups against others.

Unduplicated Counts for Student Service Groups (Five Academic Years)

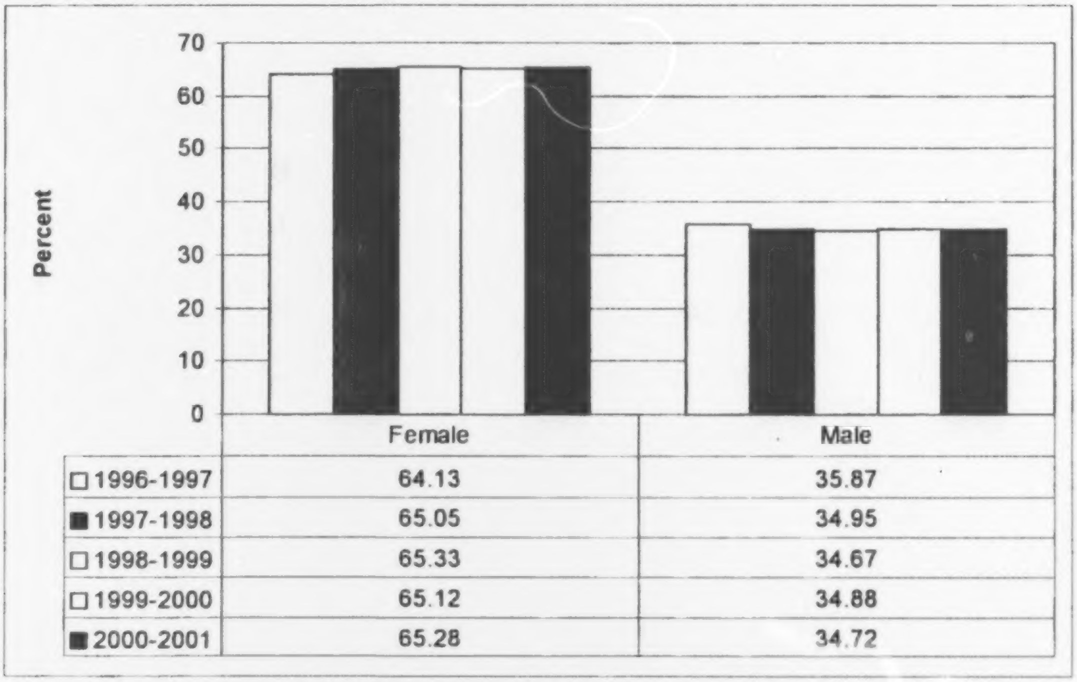


	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
ATHLETE	419	399	431	431	492
DSPS	1,489	1,683	1,647	1,637	1,815
EOPS	2,955	3,114	2,881	2,718	2,941
LD	658	672	666	600	624
PACE	206	246	267	298	201
MESA	217	147	109	153	199
CALWORKS ELIGIBLE	3,151	2,999	2,755	1,770	1,368
CALWORKS SERVED	0	0	410	1,205	1,257
FINANCIAL AID	2,219	2,812	2,310	2,953	3,550

Figure 36. Unduplicated Counts of Students by Student Service For Five Years.

Comment: The biggest changes within Figure 36 are CalWORKs eligible versus served and financial aid.

Percent Unduplicated Counts for Males and Females in a Student Service

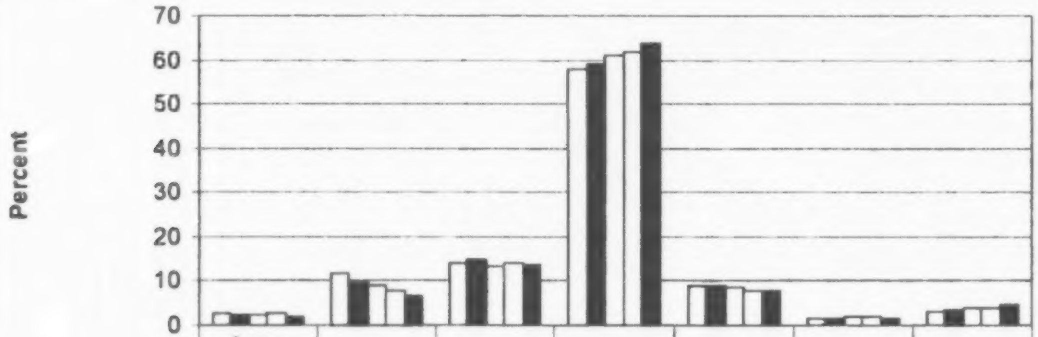


	Female	Male
□ 1996-1997	64.13	35.87
■ 1997-1998	65.05	34.95
□ 1998-1999	65.33	34.67
□ 1999-2000	65.12	34.88
■ 2000-2001	65.28	34.72

Figure 37. Percentages of Females and Males Within Student Services for Five Years.

Comment: The percentages for all ARC students in year 2000-2001 were: males = 51% females = 49%. In Figure 37 for the same year, there are proportionally more females than males in student services. Yet male students generally fall below the academic performance levels of female students.

Percent Unduplicated Counts of Students by Ethnicity and in a Student Service

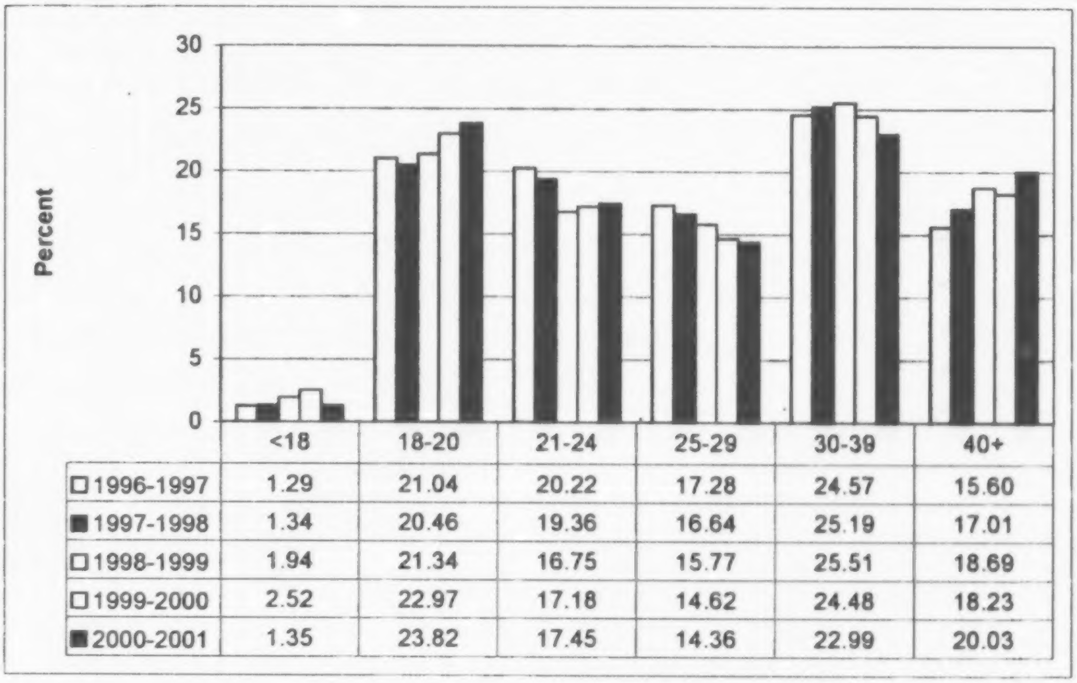


	Amer Ind/Alaskan	Asian	African American	White	Hispanic	Pac Isl/Filipino	Unknown
□ 1996-1997	2.76	11.78	14.14	57.74	9.13	1.44	3.00
■ 1997-1998	2.24	9.82	14.93	58.95	8.89	1.73	3.44
□ 1998-1999	2.45	8.87	13.45	61.13	8.49	1.76	3.85
□ 1999-2000	2.55	7.66	14.22	61.65	7.96	1.86	4.10
■ 2000-2001	2.10	6.68	13.61	63.65	7.86	1.57	4.54

Figure 38. Percentages of Student Ethnicity Within Student Services for Five Years.

Comment: Relative to the ethnic distribution of all ARC students, there are proportionally more African American students in services during 2000-2001 (13.61% versus 8.29% in the ARC population); fewer Hispanic students (7.86% versus 10.47% in the ARC population); and fewer Pacific Islander/Filipino students (1.57% versus 2.76% in the ARC population).

Percent Unduplicated Counts of Students by Age Category and in a Student Service

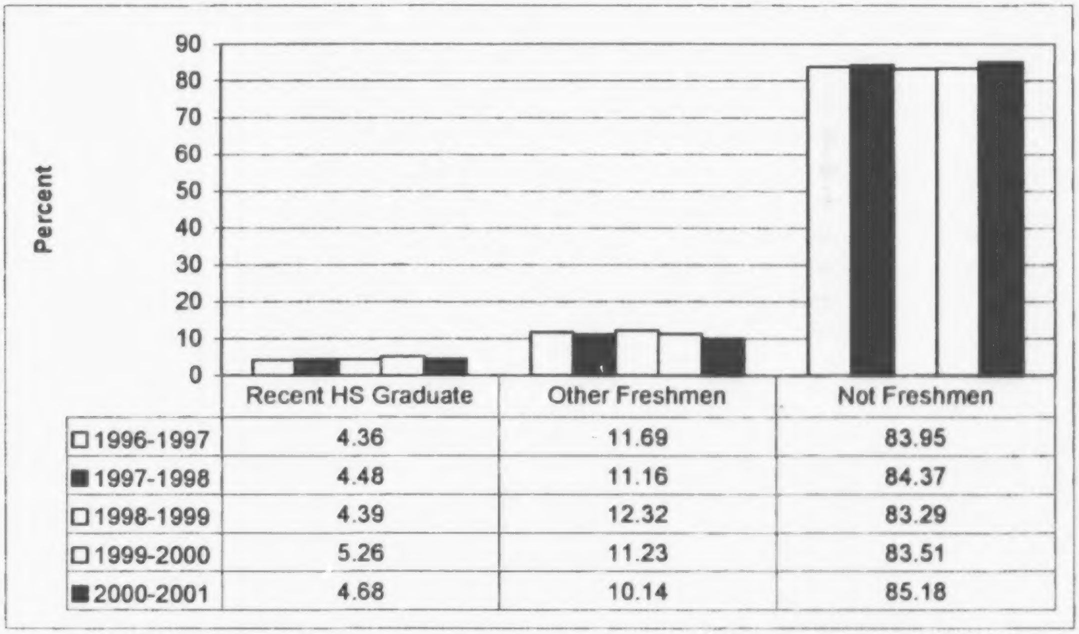


	<18	18-20	21-24	25-29	30-39	40+
□ 1996-1997	1.29	21.04	20.22	17.28	24.57	15.60
■ 1997-1998	1.34	20.46	19.36	16.64	25.19	17.01
□ 1998-1999	1.94	21.34	16.75	15.77	25.51	18.69
□ 1999-2000	2.52	22.97	17.18	14.62	24.48	18.23
■ 2000-2001	1.35	23.82	17.45	14.36	22.99	20.03

Figure 39. Percentages of Student Ages Within Student Services for Five Years.

Comment: These percentages closely correspond to the ARC population age groupings with the exception that there are fewer (by 5%) of the 40+ age group in a student service.

Percent Unduplicated Counts for Freshmen and Non-Freshmen in a Student Service

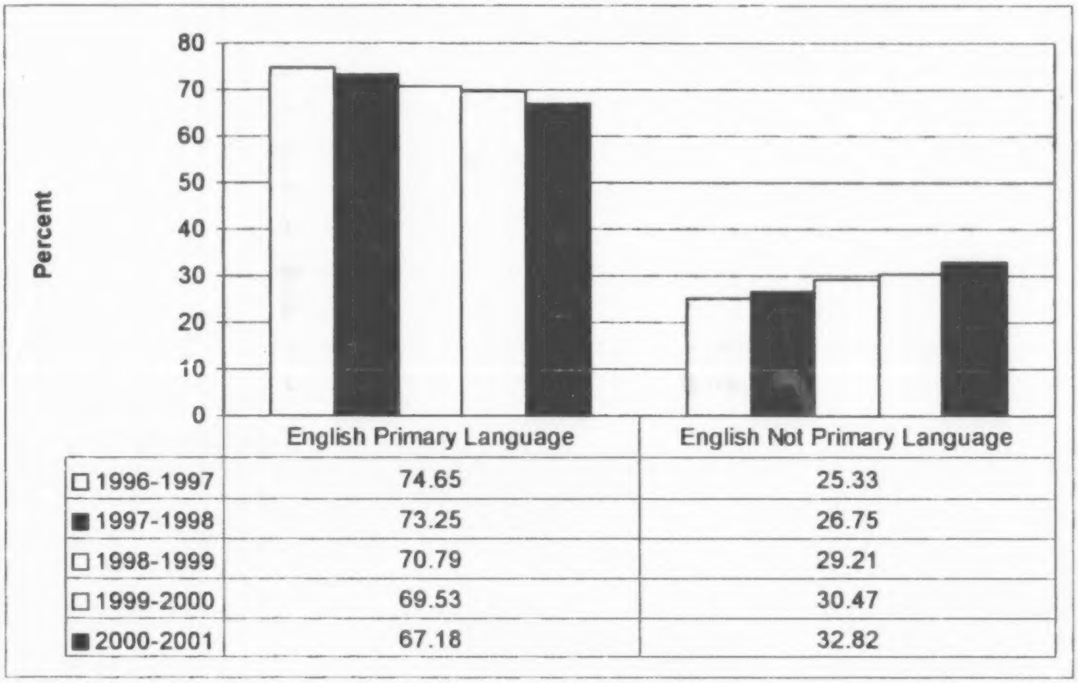


	Recent HS Graduate	Other Freshmen	Not Freshmen
□ 1996-1997	4.36	11.69	83.95
■ 1997-1998	4.48	11.16	84.37
□ 1998-1999	4.39	12.32	83.29
□ 1999-2000	5.26	11.23	83.51
■ 2000-2001	4.68	10.14	85.18

Figure 40. Percentages of Students by Freshman Status and Belonging to a Student Service Group.

Comment: Comparing the year 2000-01 percentages in Figure 40 to the ARC population, the recent high school graduates belonging to a student service are +0.5% over their proportional representation in the population. Other freshmen in a service are about +3% over their representation in the population. Non-freshmen are underrepresented by 3.5%. Given that there is a strong relationship between belonging to a student service and academic success the first semester of attendance, one might urge even more involvement (and higher representation) for recent high school graduates.

Percent Unduplicated Counts for ESL Students Also in a Student Service

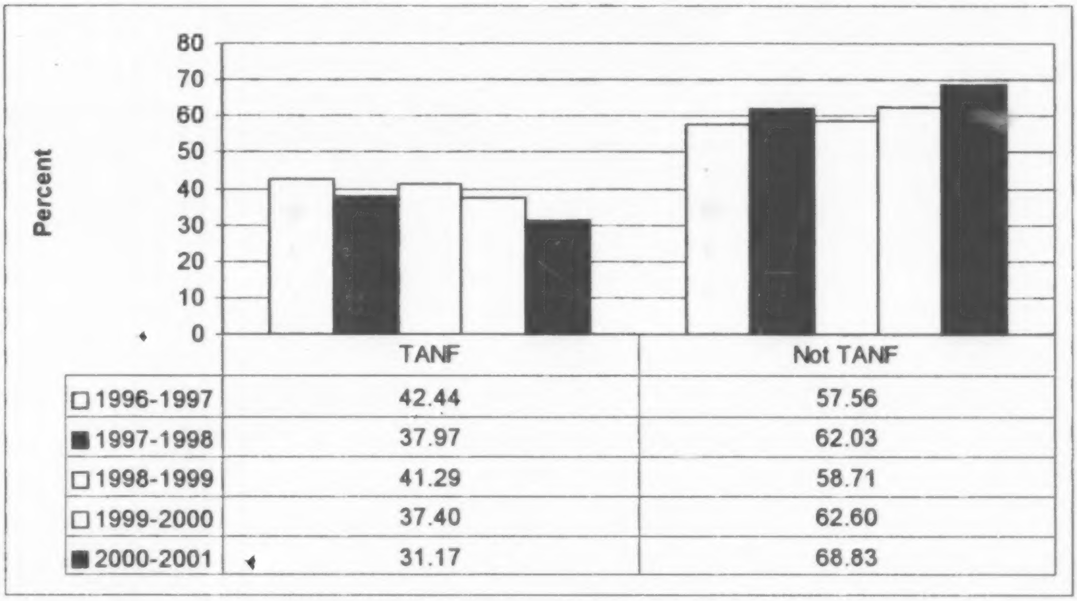


	English Primary Language	English Not Primary Language
□ 1996-1997	74.65	25.33
■ 1997-1998	73.25	26.75
□ 1998-1999	70.79	29.21
□ 1999-2000	69.53	30.47
■ 2000-2001	67.18	32.82

Figure 41. Percentages of ESL and Non-ESL Students Also Belonging to a Student Service.

Comment: The percentage of ESL students in a service has been increasing over the past five years. Also, in year 2000-2001, the percentage of ESL students in a service (32.82%) exceeded their percentage in the general population of ARC students by about 18%.

Percent Unduplicated Counts for TANF Students Also in a Student Service

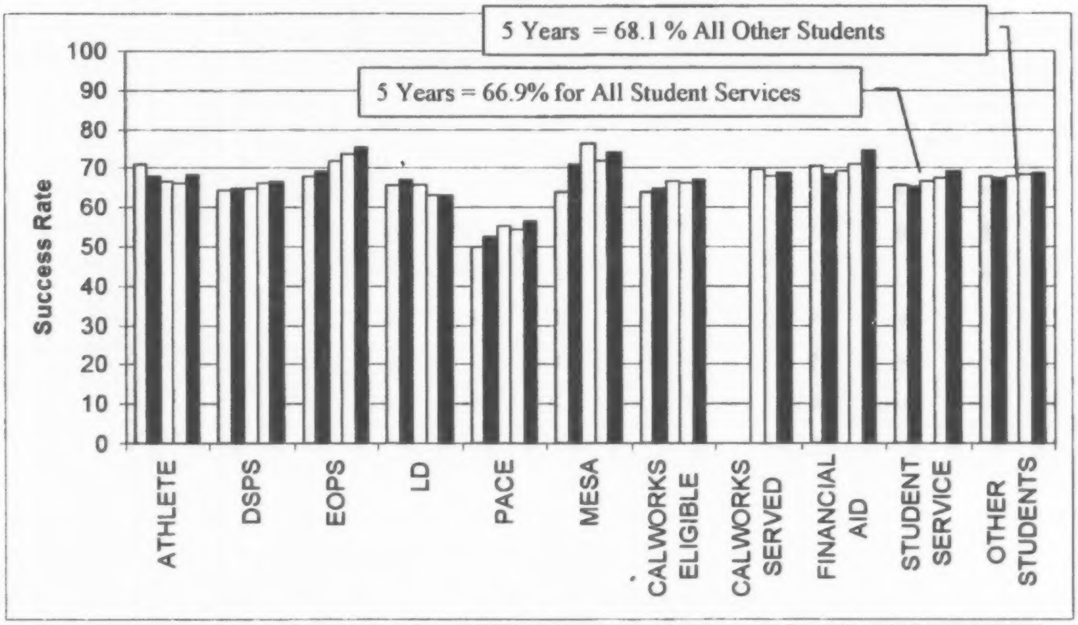


	TANF	Not TANF
□ 1996-1997	42.44	57.56
■ 1997-1998	37.97	62.03
□ 1998-1999	41.29	58.71
□ 1999-2000	37.40	62.60
■ 2000-2001	31.17	68.83

Figure 42. Percentages of TANF and Non-TANF Students Also Belonging to a Student Service.

Comment: TANF status is self-reported and indicates that a student is on temporary aid for needy families (welfare). The percent of TANF students in a service appears to be decreasing over the past five years. However, in year 2000-2001, their percent in a service was 31.17% while their percentage representation in the ARC population of all students was only 5.67%. It can be concluded that TANF students are using on-campus services well beyond their proportional representation.

Success Rates of Student Service Groups for Five Academic Years


5 Years = 68.1 % All Other Students

5 Years = 66.9% for All Student Services

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	5-Years
ATHLETE	70.9	67.8	66.5	66.1	68.5	68.0
DSPS	64.3	64.8	64.8	66.1	66.5	65.4
EOPS	68.2	69.3	71.8	73.9	75.6	71.7
LD	65.6	67.1	65.6	63.1	63.2	64.9
PACE	49.8	52.5	55.4	54.4	56.7	53.8
MESA	63.9	71.1	76.1	72.0	74.1	70.9
CALWORKS ELIGIBLE	64.0	64.7	66.8	66.2	67.3	65.5
CALWORKS SERVED	0.0	0.0	69.9	68.1	68.7	68.6
FINANCIAL AID	70.5	68.6	69.2	70.9	74.5	71.0
All STUDENT SERVICE	65.6	65.5	66.6	67.5	69.2	66.9
OTHER STUDENTS	67.8	67.5	68.0	68.3	68.7	68.1

Figure 43. Five-Year Success Rates For Each of the Student Service Groups.

__Comment__: Previously it was mentioned that student service groups outperform other students in completing many of the benchmarks of achievement through 60 units. However, when combining all the student services together, their overall success rate is a little below that of other students not in a service. This is not necessarily a contradiction because students can achieve the various benchmarks with slightly lower grades (or success rates) than another group with higher grades but not completing the benchmarks or taking longer than four years to complete them. The highest performing students in a service are EOPS, MESA, CalWORKs served, and financial aid. All of those service groups had higher success rates than all students not in a service. PACE is the only program that is seriously below the norm. The next graph depicts the yearly changes in student service success rates.

Overall Success Rates for Student Service Groups Across Five Academic Years

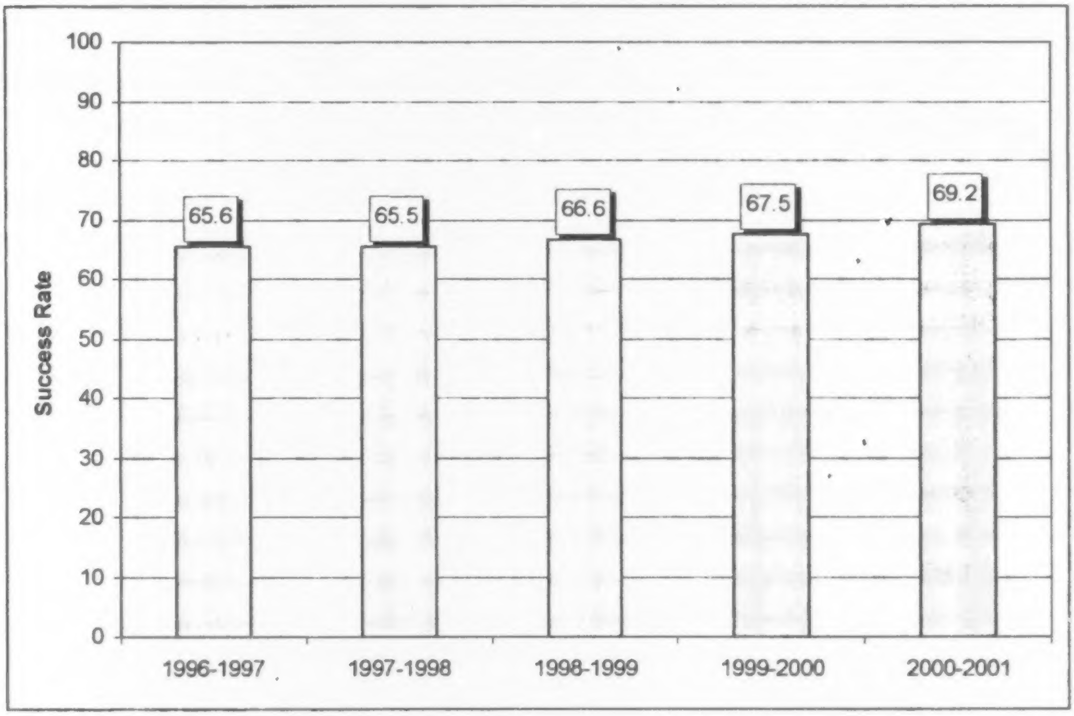


Figure 44. Five Years of Success Rates by Composite of all Student Service Groups.

Comment: The net increase during the five years (from 65.6 to 69.2) is 3.6%. By contrast, the five-year gain in success rate for all other students is 0.9%.

Success Rates for Combined Student Service Groups by Demography

Table 20. Success Rates Within Student Services by Gender.

Gender	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Female	65.7	65.7	67.3	68.5	70.2
Male	65.6	65.1	65.4	65.8	67.3

Table 21. Success Rates Within Student Services by Ethnicity.

Ethnicity	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
American Indian/Alaskan	48.2	54.9	57.2	57.1	61.6
Asian	75.9	75.9	75.1	71.3	70.8
African American	45.3	45.2	47.8	48.7	50.2
White	70.5	70.4	70.9	73.0	74.3
Hispanic	60.6	59.2	60.7	59.6	63.7
Pacific Islander/Filipino	55.6	64.7	65.6	67.3	66.1
Other	60.5	63.3	65.7	66.5	66.8

Table 22. Success Rates Within Student Services by Age Grouping.

Age Group	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
<18	72.8	73.1	73.8	73.1	68.7
18-20	62.6	62.4	62.8	64.4	66.2
21-24	59.2	62.0	60.6	62.4	65.9
25-29	63.1	63.8	66.5	64.8	67.9
30-39	70.0	68.3	71.2	72.8	72.4
40+	75.4	72.0	71.3	72.2	73.8

Table 23. Success Rates Within Student Services by Freshmen Status.

Freshmen Status	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Recent HS Grad	67.0	61.3	61.1	58.6	64.1
Other Freshmen	51.7	53.2	60.0	60.0	61.4
Not Freshmen	67.3	67.1	67.8	69.1	70.3

Table 24. Success Rates Within Student Services by Primary Language.

Primary Language	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
English Primary Language	60.4	60.5	61.7	62.6	63.9
English Not Primary Language	79.8	78.3	78.2	78.3	79.6

Table 25. Success Rates Within Student Services by Course Level

Course Level	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
University Transfer Level [1-49]	67.1	67.1	67.6	68.1	69.5
Non-Transfer/Occupation [50-99]	60.0	61.5	64.1	65.0	66.8
Apprenticeship [100-199]	88.9	100.0	90.7	88.7	82.9
Basic Skills [200-299]	66.5	62.7	65.7	67.3	69.6

Comment: The preceding six tables of success rates within student services for various demographic groupings show much the same outcomes as for all students. The higher performing students are likely to be female, Asian or white, <18 or 30+ years of age, not a freshman, and an ESL student. The highest success rate honor within a student service goes to ESL students. In addition, the success rates by course level (Table 25) are reasonably high when compared with 68.7% in year 2000-2001 for non-service group students. Only the rates of non-transfer/occupational courses are slightly lower by 1.9%.

Summary of Student Service Section

- The number of students affiliated with a student service is not in perfect proportion to the ARC population. Males are underrepresented, as are Hispanic and Pacific Islander/Filipino students. Students 40+ years of age are also underrepresented. There are overlapping categories.
- The students who are substantially over-represented by their proportion in student services compared with the ARC population values are: females, ESL, and TANF students. Once again, these categories may overlap.
- In year 2000-2001, there were very high rates of academic success for students affiliated with at least one of the following three student service groups: EOP&S, MESA, and financial aid (75.6%, 74.1%, 74.5%).
- Other relatively high success rates were: athletes (68.5%), DSPS (66.5%), and CalWORKs eligible & served (67.3% & 68.7%).
- A low to modest success rate was found for: PACE (56.7%) and LD (63.2%).
- Success rates within student service groups also vary by familiar student demography. Highest success rates are associated with: females, Asian or white ethnicity, 30+ years of age, not being a freshman, and ESL.

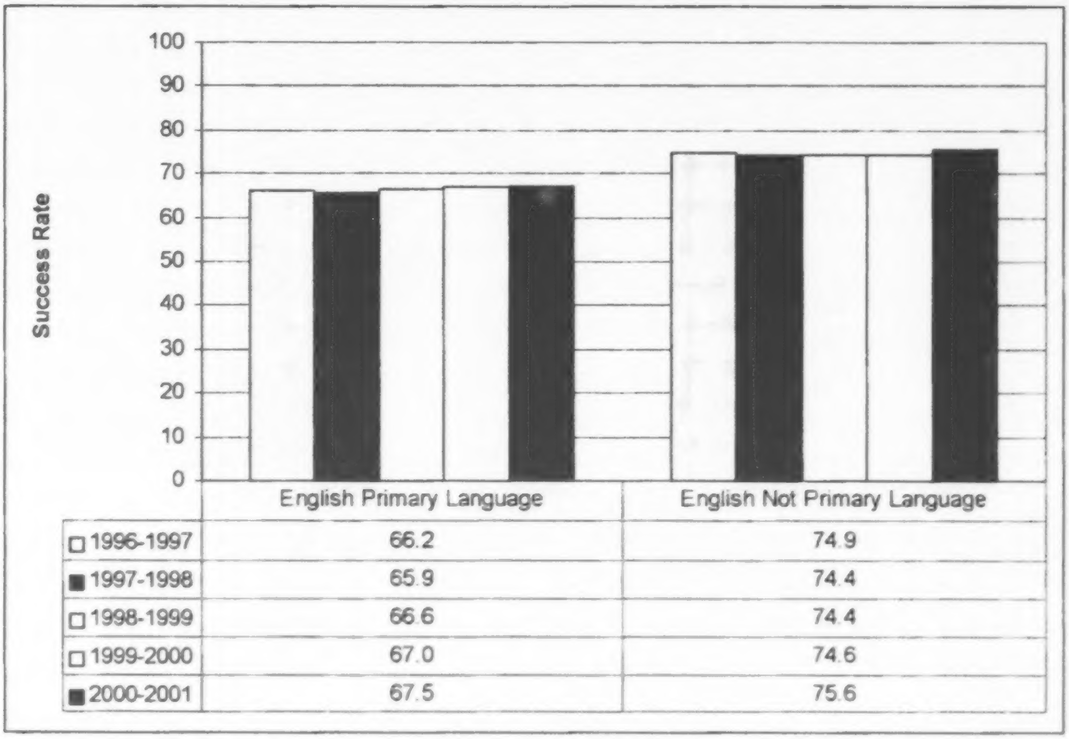
Implications for Planning

1. It has been amply shown that students gain an additional academic benefit when affiliated with a service on campus. Because of this, ARC should further increase efforts toward having new students become involved with a service, especially recent high school freshmen.
2. Identify the aspects of service groups that increase student success and explore how these can be implemented across a wider range of students.

English as a Second Language

The second group for an in-depth focus (the first was student services) is ESL. We were guided by the question, "Do ESL students outperform all other students across every demographic variable?" The following tables and graphs reveal the answer.

Success Rates for ESL & Non-ESL Students in on-ESL Courses

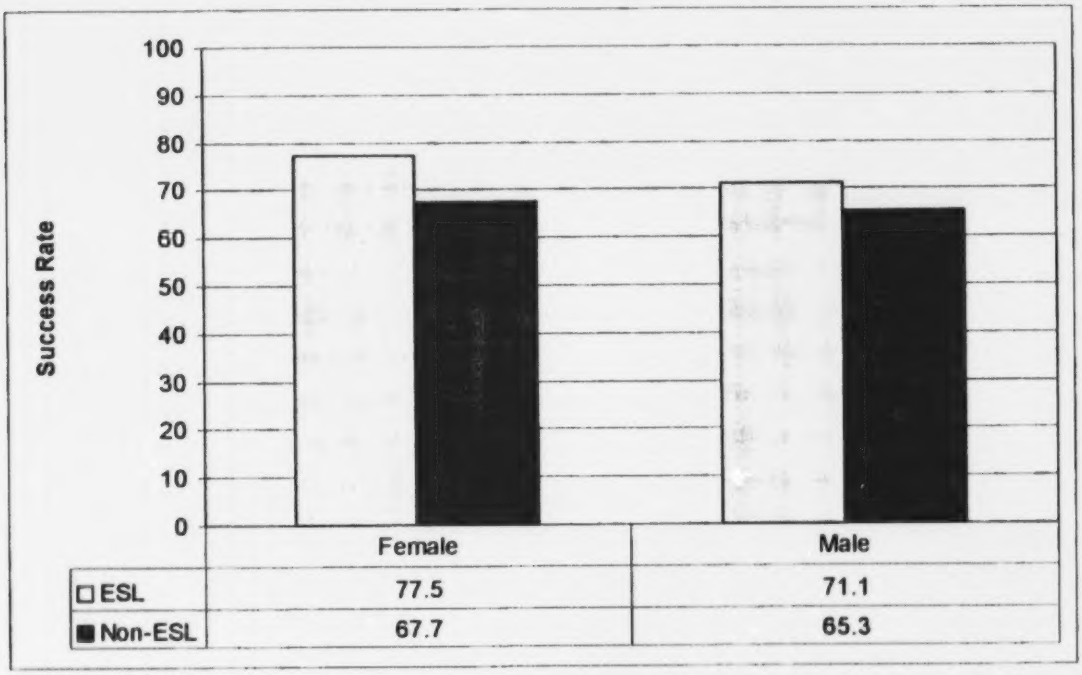


	English Primary Language	English Not Primary Language
☐ 1996-1997	66.2	74.9
■ 1997-1998	65.9	74.4
☐ 1998-1999	66.6	74.4
☐ 1999-2000	67.0	74.6
■ 2000-2001	67.5	75.6

Figure 45. Comparison of Success Rates for ESL and non-ESL Students in all Non-ESL Courses.

Comment: For several years including the most recent five, ESL students outperformed Non-ESL students in courses outside the ESL Department. The gap is about 8 percentage points. There are also slight gains in both groups from five years ago.

Success Rates for ESL & Non-ESL by Gender (Five Academic Years)

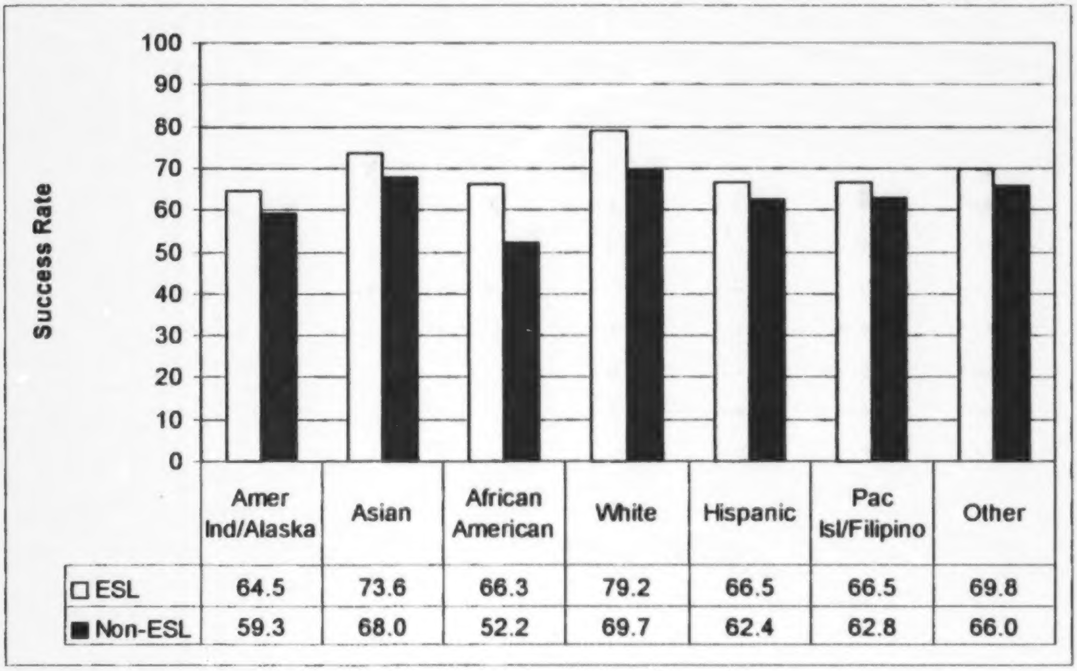


	Gender	Enrollments
ESL	Female	57,350
Non-ESL	Female	320,274
ESL	Male	41,537
Non-ESL	Male	250,598

Figure 46. Success Rates of ESL and Non-ESL Students by Gender.

Comment: The higher success rates for ESL students still apply to males and females. The gap between ESL females and Non-ESL females is 9.8 percentage points, while the male gap is smaller at 5.8 percentage points.

Success Rates for ESL & Non-ESL Students by Ethnicity (Five Academic Years)

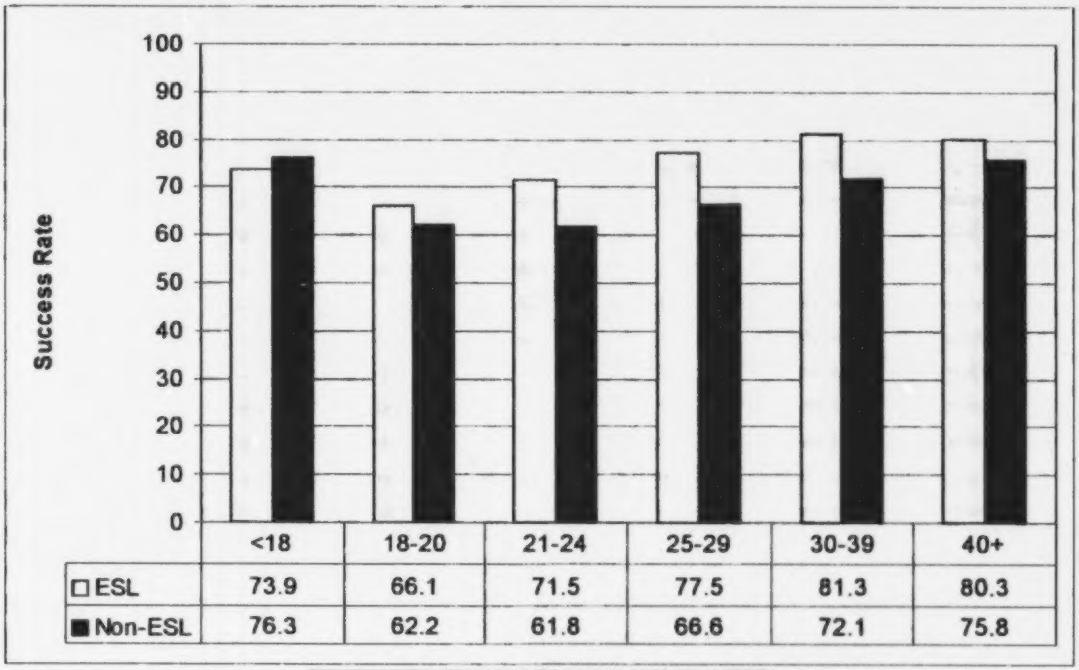


	Ethnicity	Enrollments
ESL	American Indian/Alaskan	313
Non-ESL	American Indian Alaskan	14,733
ESL	Asian	31,632
Non-ESL	Asian	23,550
ESL	African American	1,619
Non-ESL	African American	55,433
ESL	White	45,696
Non-ESL	White	383,363
ESL	Hispanic	10,778
Non-ESL	Hispanic	53,495
ESL	Pac Islander/Filipino	4,217
Non-ESL	Pac Islander/Filipino	15,379
ESL	Other	4,632
Non-ESL	Other	24,925

Figure 47. Success Rates of ESL and Non-ESL Students by Ethnicity.

Comment: The higher success rates for ESL students also apply to all major categories of ethnicity. The unduplicated counts given in the table above are also large enough to rule out any suggestion that the results are likely due to sampling error.

Success Rates for ESL/Non-ESL by Age Group (Five Academic Years)

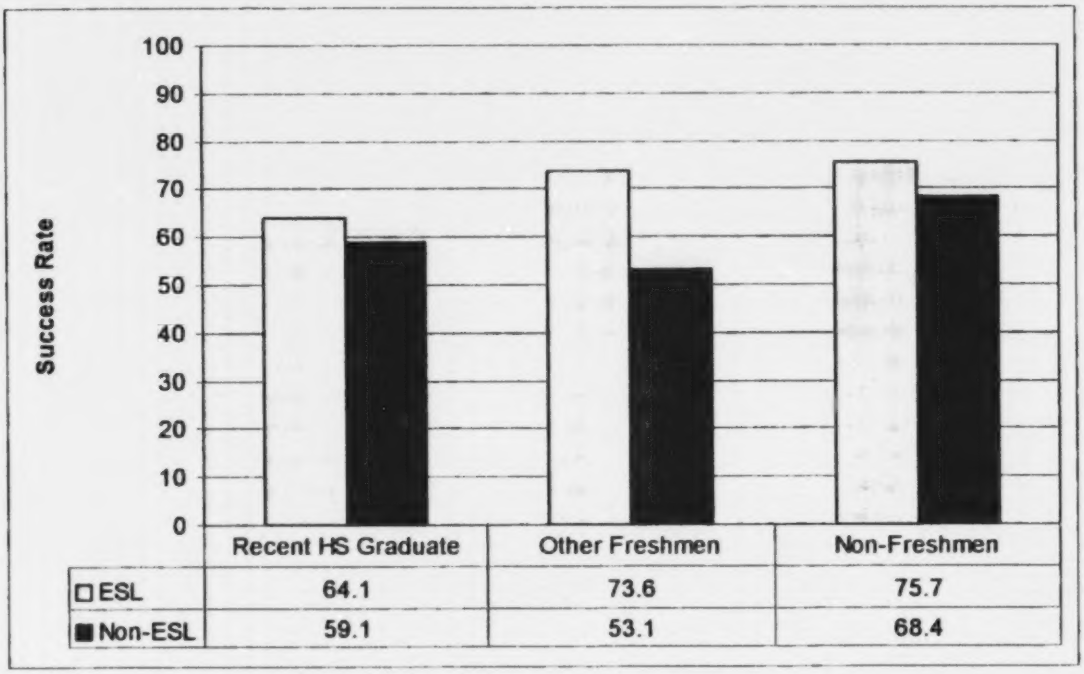


	Age Group	Enrollments	Success
ESL	<18	2,163	73.9
Non-ESL	<18	10,669	76.3
ESL	18-20	22,865	66.1
Non-ESL	18-20	186,512	62.2
ESL	21-24	20,897	71.5
Non-ESL	21-24	119,414	61.8
ESL	25-29	15,058	77.5
Non-ESL	25-29	74,604	66.6
ESL	30-39	21,750	81.3
Non-ESL	30-39	90,175	72.1
ESL	40+	16,154	80.3
Non-ESL	40+	89,495	75.8

Figure 48. Success Rates of ESL and Non-ESL Students by Ages.

Comment: The higher success rates of ESL students are nearly uniform across all age groups with one exception, the < 18 age group. Even with that age group, both ESL and Non-ESL have high success rates.

Success Rates for ESL/Non-ESL by Freshmen Status (Five Academic Years)

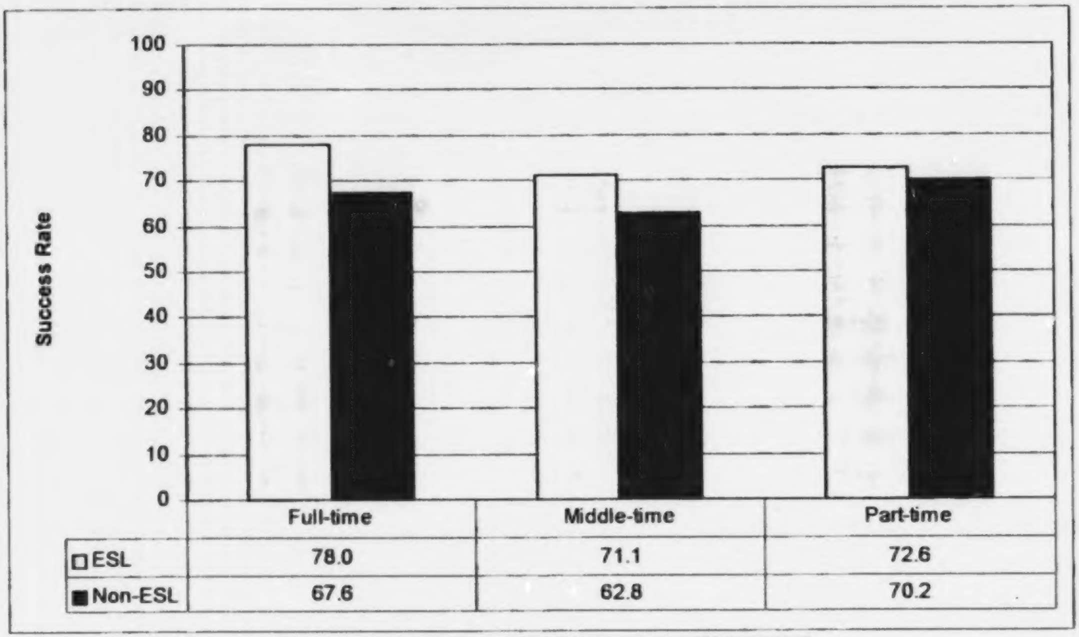


	Freshmen Status	Enrollments	Success
ESL	Recent HS Grad	5,446	64.1
Non-ESL	Recent HS Grad	43,544	59.1
ESL	Other Freshmen	10,582	73.6
Non-ESL	Other Freshmen	38,110	53.1
ESL	Not Freshmen	82,859	75.7
Non-ESL	Not Freshmen	489,224	68.4

Figure 49. Success Rates of ESL and Non-ESL Students by Freshmen Status.

Comment: Freshmen are generally considered an at-risk group although this clearly does not apply to all individuals. The graph above also shows lower success rates for recent high school graduates. Still, the rates of ESL students are the highest.

Success Rate for ESL/Non-ESL by Enrollment Status (Five Academic Years)

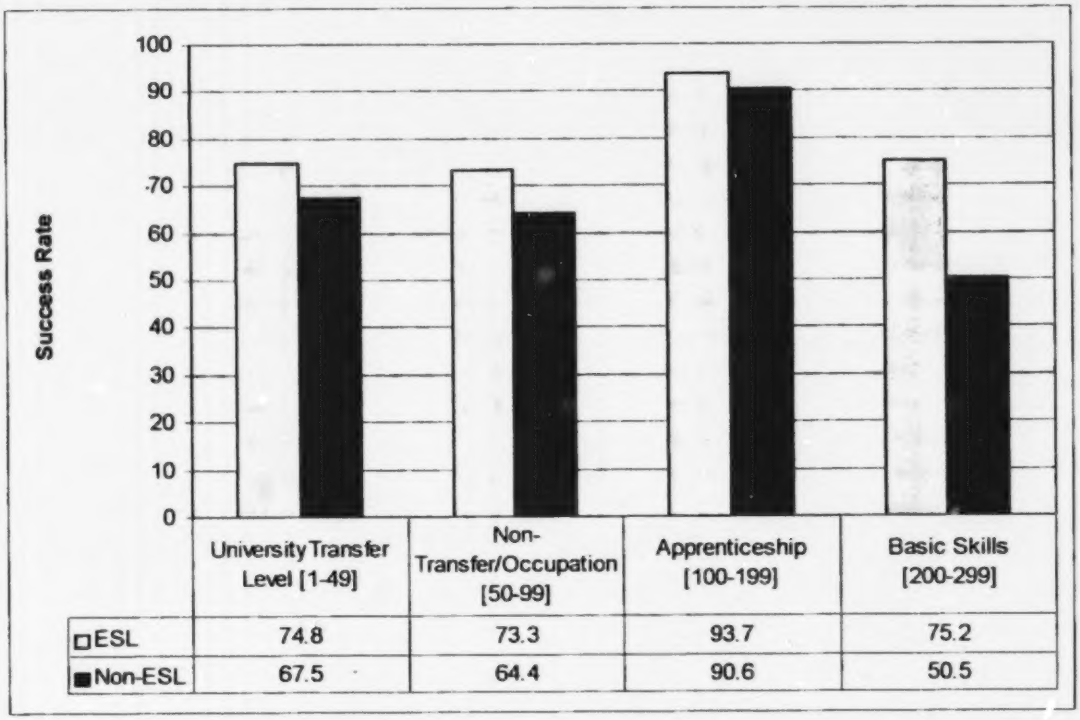


	Enrollment Status	Enrollments	Success
ESL	Full-time	49,092	78.0
Non-ESL	Full-time	217,377	67.6
ESL	Middle-time	29,939	71.1
Non-ESL	Middle-time	198,961	62.8
ESL	Part-time	19,856	72.6
Non-ESL	Part-time	154,540	70.2

Figure 50. Success Rates of ESL and Non-ESL Students by Load.

Comment: There is a higher success rate for ESL students across load status although the gap is not uniform. For example, the gap between ESL and Non-ESL for full-time students is 10.4%, for middle-time it is 8.3%, and the gap for part-time is only 2.4%.

Success Rate for ESL/Non-ESL by Course Level (Five Academic Years)



	Course Level	Enrollments	Success
ESL	University Transfer Level [1-49]	65,620	74.8
Non-ESL	University Transfer Level [1-49]	444,605	67.5
ESL	Non-Transfer/Occupation [50-99]	14,615	73.3
Non-ESL	Non-Transfer/Occupation [50-99]	90,548	64.4
ESL	Apprenticeship [100-199]	993	93.7
Non-ESL	Apprenticeship [100-199]	10,713	90.6
ESL	Basic Skills [200-299]	17,586	75.2
Non-ESL	Basic Skills [200-299]	23,939	50.5

Figure 51. Success Rates For ESL and Non-ESL by Course Level.

Comment: The largest cap favoring the ESL students occurs in basic skill courses, the difference in success rates being nearly 25%. Once again, the ESL students show high rates of success across all levels of courses.

ESL and Non-ESL Performance Across Academic Areas (Five Years)

Table 26. Grade Distribution and Success Rates of ESL and Non-ESL Students by Academic Area.

	Area	Total	A %	B %	C-CR %	D %	F %	WT %	I %	Success
ESL	Allied Health	766	36.8	23.5	24.0	1.4	5.5	8.2	0.5	84.3
Non-ESL	Allied Health	5,643	24.8	19.3	30.6	1.2	12.8	8.1	3.2	74.7
ESL	Fine and Applied Arts	7,980	47.0	20.0	11.4	2.7	6.1	12.0	0.9	78.4
Non-ESL	Fine and Applied Arts	68,499	40.5	18.3	10.2	3.4	9.4	16.9	1.3	69.0
ESL	Behavioral Social Science	11,617	23.4	19.7	30.4	4.4	5.9	15.3	0.9	73.5
Non-ESL	Behavioral Social Science	106,677	19.7	20.2	25.9	5.1	8.7	19.3	1.2	65.7
ESL	Business	20,279	37.2	25.4	13.5	3.2	6.7	13.4	0.6	76.1
Non-ESL	Business	79,618	38.1	17.5	11.2	2.8	11.3	18.1	1.0	66.8
ESL	Counseling	985	57.7	11.9	14.1	1.9	5.3	5.8	3.4	83.7
Non-ESL	Counseling	11,361	43.0	9.5	23.2	2.7	9.4	10.0	2.3	75.7
ESL	English	10,243	13.7	16.7	34.3	4.3	11.9	17.7	1.5	64.7
Non-ESL	English	61,380	17.1	21.5	18.8	3.9	12.9	24.2	1.5	57.4
ESL	Fire Technology	98	9.2	28.6	27.6	2.0	17.3	14.3	1.0	65.3
Non-ESL	Fire Technology	3,920	14.9	15.8	54.2	0.9	7.6	6.3	0.3	84.9
ESL	Humanities	21,641	18.4	18.5	41.7	2.9	5.3	13.0	0.3	78.6
Non-ESL	Humanities	48,366	26.6	23.6	18.8	2.8	6.8	20.1	1.2	69.0
ESL	Individual Studies	16	75.0	6.3	6.3	0.0	0.0	12.5	0.0	87.5
Non-ESL	Individual Studies	186	73.1	8.6	2.7	0.0	2.2	13.4	0.0	84.4
ESL	Library	227	43.6	18.1	5.3	1.3	7.5	18.9	5.3	67.0
Non-ESL	Library	1,706	47.8	13.1	5.3	2.1	6.7	21.6	3.4	66.2
ESL	Math and Engineering	8,926	28.6	22.6	16.8	5.1	8.3	18.5	0.2	68.0
Non-ESL	Math and Engineering	59,623	18.3	19.6	19.2	5.5	11.2	25.8	0.3	57.2
ESL	Physical Education	5,181	55.5	13.5	6.0	1.4	5.2	18.0	0.4	75.0
Non-ESL	Physical Education	45,345	54.9	9.6	5.2	1.5	6.8	21.4	0.6	69.7
ESL	Science	5,657	26.7	23.2	20.6	5.2	6.3	17.2	0.9	70.4
Non-ESL	Science	43,675	26.9	24.3	18.1	4.7	7.1	17.9	1.0	69.3
ESL	Technical Vocation	5,014	38.3	25.8	20.7	2.5	5.3	6.3	1.0	84.9
Non-ESL	Technical Vocation	33,258	29.2	22.5	28.9	1.9	7.7	8.4	1.4	80.6
ESL	Work Study	257	68.9	11.3	1.6	0.4	2.3	10.1	5.4	81.7
Non-ESL	Work Study	1,621	51.2	11.7	1.7	0.2	9.2	17.0	9.1	64.5

Comment: The ESL students have higher success rates across every academic area except fire technology. In English, their overall success rate is 64.7%, in math and engineering 68%, and in science their success rate is 70.4%. In examining the rate of A and B grades, the ESL students have an unweighted median of 37.2% for A's and a median of 19.7% for B's. The same A and B percentages for Non-ESL students are 29.2% and 18.3%.

Summary of ESL Section

- In the 1999 Institutional Effectiveness Report, the five-year success rate for ESL students was reported as 71.6% in all Non-ESL courses. This was compared to the success rate of all Non-ESL students, which was then 65.3%.

- During 2000-2001, the ESL students have produced an even higher success rate in Non-ESL courses, 75.6%, compared with non-ESL students at 67.5%. The lowest ESL yearly rate over the past five years was 74.4%.

- Several characteristics of ESL students were examined with the intent of determining if some other factor was related to success besides simply being an ESL student. None could be found.

- Both ESL male and female students have produced high success rates, as have all ethnic groups within ESL, and almost all age groups. The ESL students cross-tabulated by their freshmen status (i.e., recent high school graduate, other freshmen, not freshmen), also outperformed Non-ESL students.

- Examining academic load, level of courses, and academic areas, the ESL students had higher success rates than Non-ESL students with but two small exceptions: under 18 years of age, and in the area of fire technology.

- The conclusion is that ESL students are academically superior "across the board" on those variables that have been measured. Either the ESL student has more motivation and more skills to begin with, or the ESL department is doing something very well. Perhaps there is truth in both conclusions.

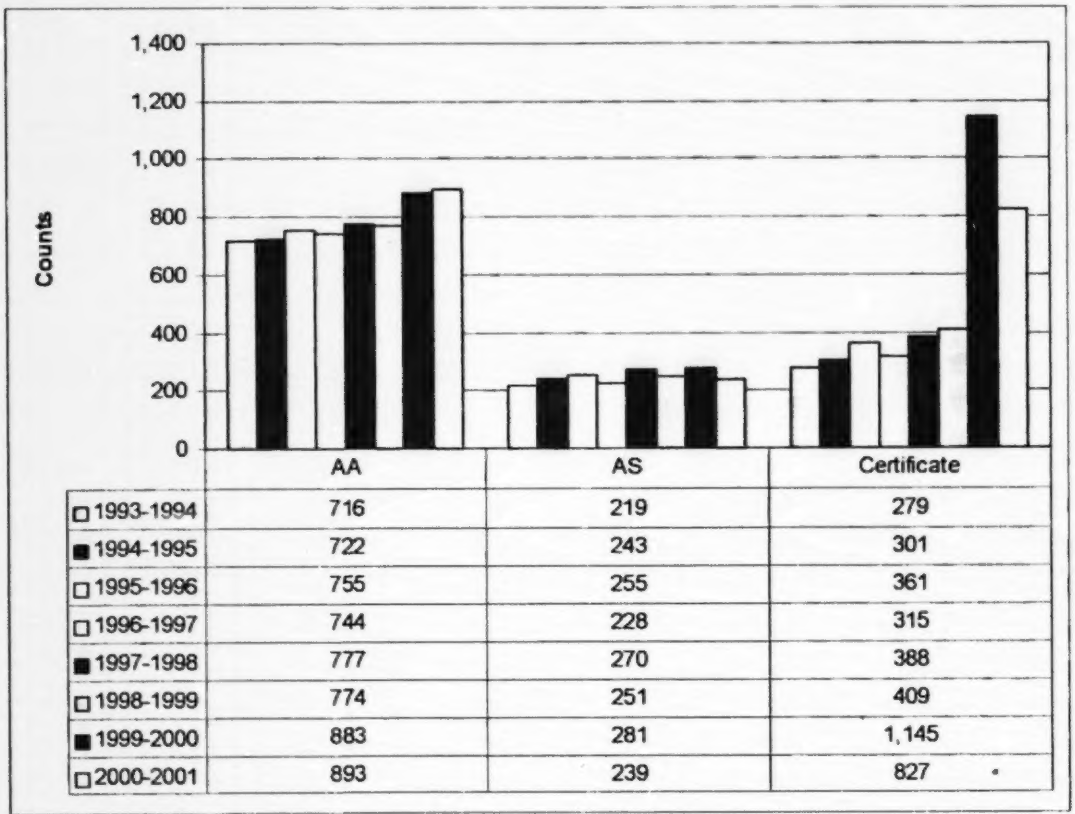
Implications for Planning

1. The current ethnic categories, including the expanded one, are inadequate to determine more precisely who the ESL student really is. There is much speculation, for example, that the Russian and Ukrainian students account for most of the success. The only way to find out is to have more sub-categories within the major "white" category. Presently, Asian has several sub-categories, as does Pacific Islander. Therefore, consider revising the ethnicity section on all forms asking for such information.

2. Using focus groups as a methodology to determine why ESL students have the highest success rate on campus. If appropriate, apply the findings to other groups with low success.

Degrees, Certificates & the Transfer Function

Traditional measures of an academic institution's achievement are its degrees conferred, and in the case of community colleges, its transfers and certificates as well. This section covers those three elements: degrees, certificates, and the transfer function.



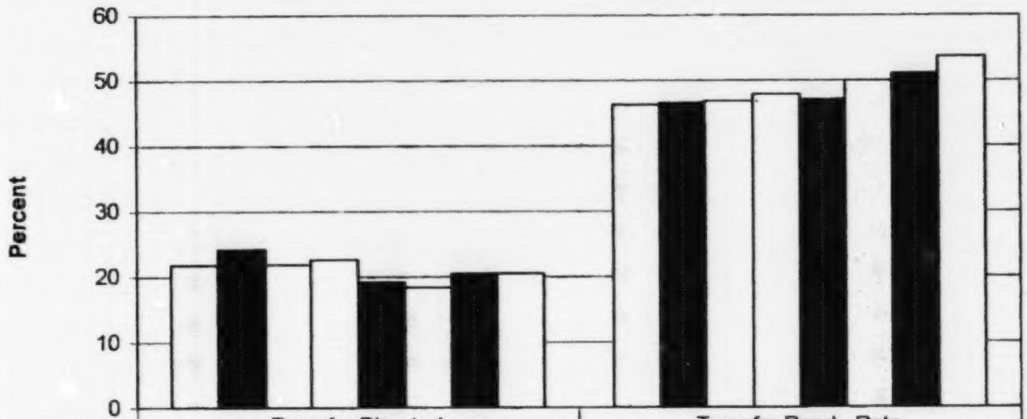
	AA	AS	Certificate
□ 1993-1994	716	219	279
■ 1994-1995	722	243	301
□ 1995-1996	755	255	361
□ 1996-1997	744	228	315
■ 1997-1998	777	270	388
□ 1998-1999	774	251	409
■ 1999-2000	883	281	1,145
□ 2000-2001	893	239	827

Figure 52. The Number of Degrees and Certificates Awarded for the Past Eight Academic Years.

Comment: Associate degrees conferred in 2000-01 represent a 16.5% increase from five years ago (1996-97). Associate in Arts degrees are awarded over Associate in Science in a ratio of about 3.7 to 1. The dramatic increase in certificates starting in the 1999-2000 academic year can be attributed to a PFE project dedicated to identifying and informing students of their eligibility for certificates. Compared with five years ago, the awarding of certificates has increased by almost 163%.

The Transfer Ready Picture for ARC

Because the statistics on actual transfer counts have not been measured with the accuracy one would like, the transfer ready model was created in 1994. It is based upon two major elements: the **transfer directed** and the **transfer ready**. The **transfer directed** (a percentage) are those new first-time freshmen students (recent high school graduates plus other new freshmen), who had no prior college units, and who enrolled in any transfer level English course and any transfer level mathematics or statistics course within four years from first enrollment at ARC. The **transfer ready** cohort are those **transfer directed** students who also complete 56+ transfer units at ARC, have a 2.00+ GPA on those transfer units, and complete a transfer level English course and a transfer level math or statistics course with at least a "C" or "CR" grade - all within four years from the time of initial enrollment. The **transfer ready rate** is the percentage of **transfer directed** who complete the **transfer ready** requirements (TR/TD x 100).



	Transfer Directed	Transfer Ready Rate
☐F1990	21.8	46.2
■F1991	24.1	46.7
☐F1992	21.8	46.9
☐F1993	22.6	47.9
■F1994	19.1	47.2
☐F1995	18.5	49.9
■F1996	20.4	51.0
☐F1997	20.4	53.8

Figure 53. Transfer Directed (Percentages) and Transfer Ready Rates (Percentages) for Eight Years.

Comment: The vertical bars on the left of the above graph represent eight fall semester freshmen cohorts, counted at the 4th week census, and each tracked over four years. The transfer directed rates average to around 21%. These are the freshmen that show behavioral evidence of intending to transfer. The vertical bars on the right side of the above graph show the transfer ready rates for the eight freshmen groups. The average of these is approximately 49%, but the fall 1997 transfer directed group has increased their ready rate to 53.8% given the four years of opportunity (by end of 2000). The various stages of the fall 1996 and fall 1997 groups are shown next.

Overall Transfer Ready Stages

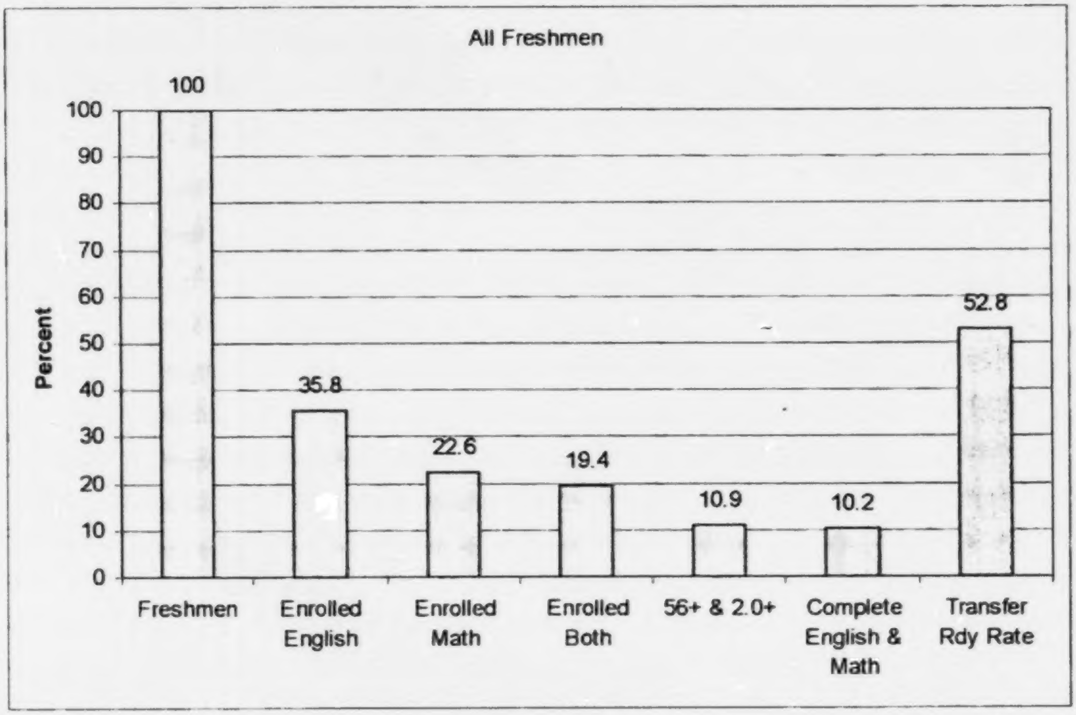


Figure 54. Fall 1996 & Fall 1997 New Freshmen (N= 8,236) and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: The transfer directed group (Enrolled Both 19.4%) is slightly smaller than what was reported in the previous figure (20.4%). The reason for this is that previous counts were based upon a fourth-week census date. Now all such counts are based upon end-of-semester data. The correcting adjustment was necessary in order to capture enrollments in courses with later starting dates. The transfer ready rate of 52.8% represents an improvement over what has been seen in past years. There is also evidence that the transfer ready rate would slightly increase if the allowable time-span were changed from four years to six years.

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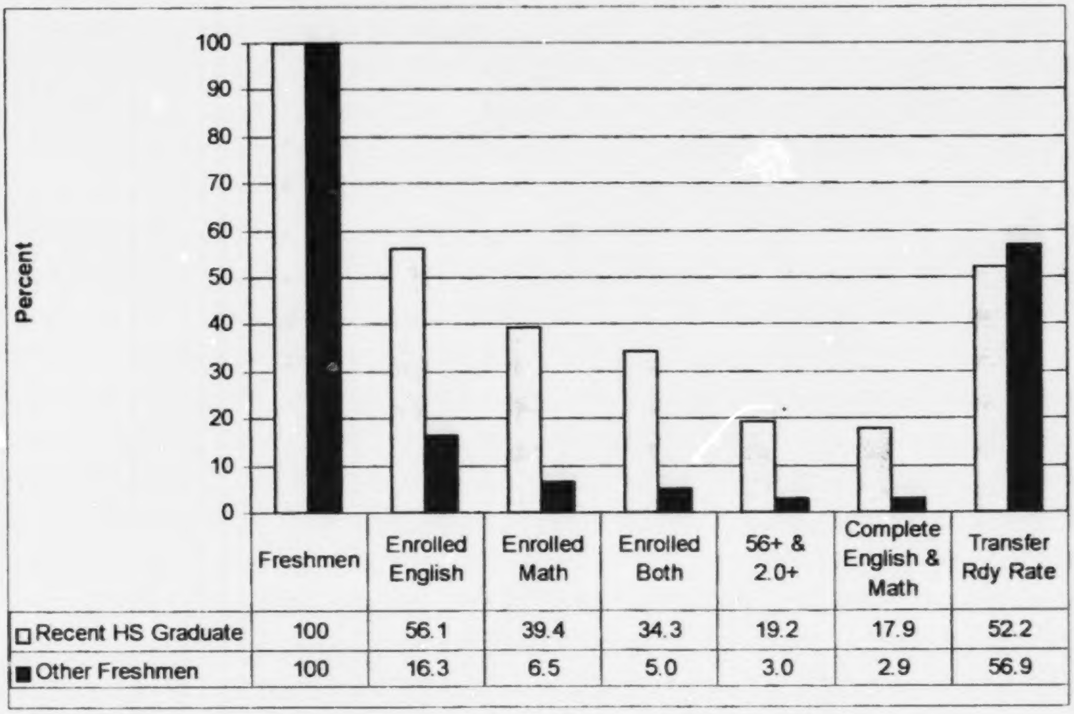
Transfer Ready Stages by Recent High School Graduates & Other Freshmen

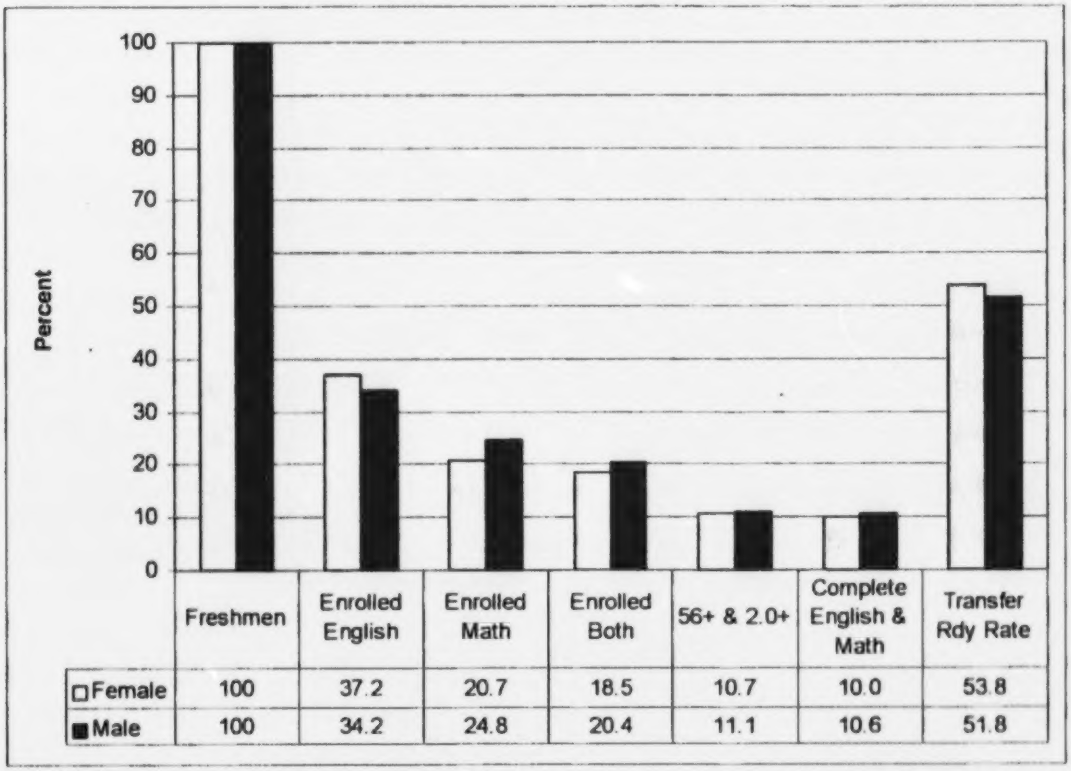


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
☐ Recent HS Graduate	100	56.1	39.4	34.3	19.2	17.9	52.2
■ Other Freshmen	100	16.3	6.5	5.0	3.0	2.9	56.9

Figure 55. Recent High School Graduates (N = 4,034) and Other Freshmen (N = 4,202) and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: Recent high school graduates usually had much higher enrollments and completion rates in this model than did the other freshmen cohort. For example, 1,385 of 4,034 (34.3%) became transfer directed. For other freshmen, the rate of transfer directed (5%) is based upon 211 of 4,202. Yet when the transfer ready rates are computed, the higher value is seen for other freshmen. In this case, the counts of recent high school graduates who were transfer directed and who also completed all transfer ready requirements were 723 of 1,385 or 52.2%. The same computations for other freshmen: 120 of 211 or 56.9%. All this is pointed out to show that ending percentages can be somewhat misleading when they are based upon very different numbers.

Transfer Ready Stages by Gender

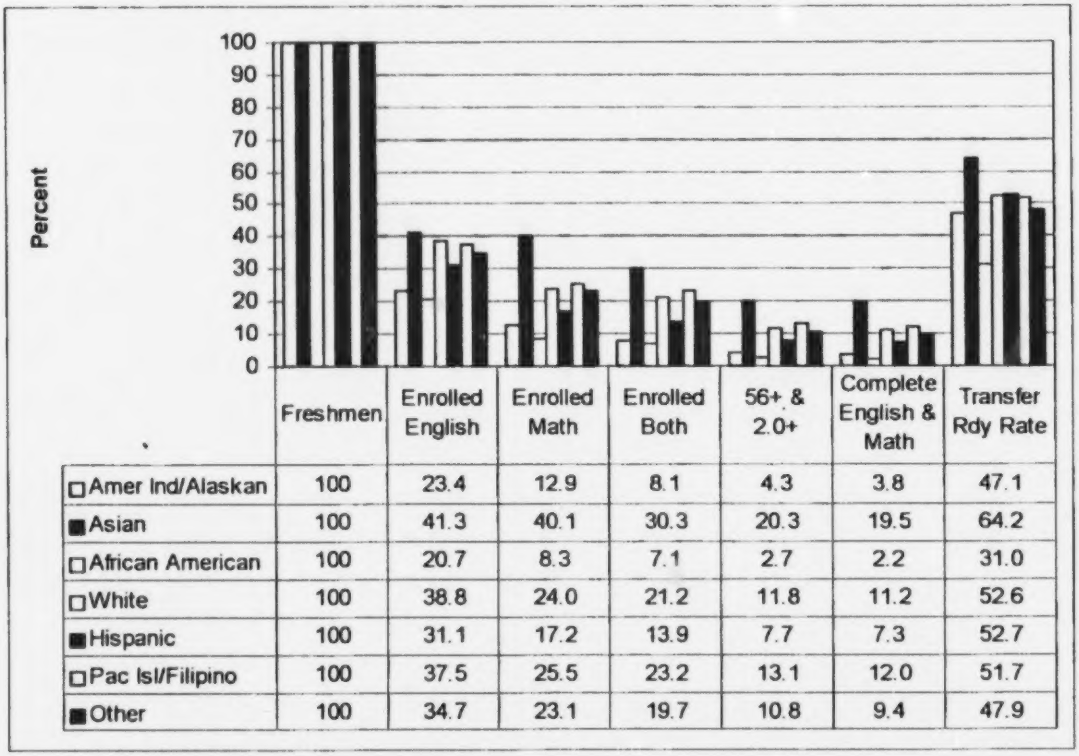


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
☐ Female	100	37.2	20.7	18.5	10.7	10.0	53.8
■ Male	100	34.2	24.8	20.4	11.1	10.6	51.8

Figure 56. Female and Male Freshmen and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: The higher percentage of females enrolled in English is offset by the higher rates of enrollment in math by males. The ending transfer ready rates show that proportionally more female students complete the transfer ready requirements within four years.

Transfer Ready Stages by Ethnicity

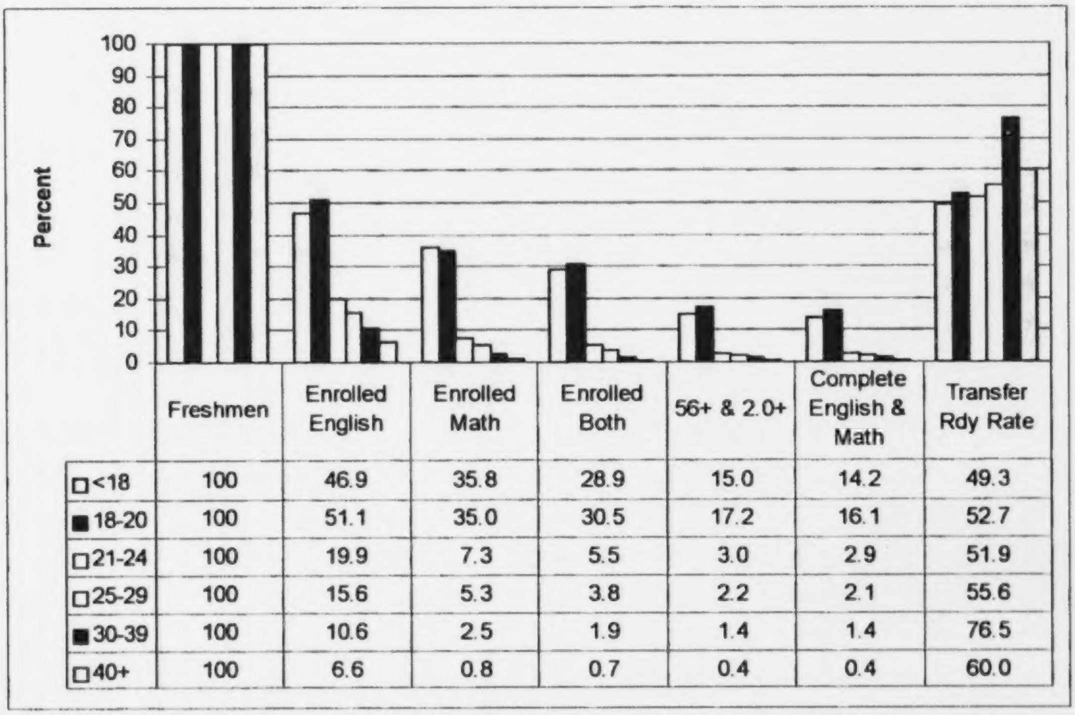


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
□ Amer Ind/Alaskan	100	23.4	12.9	8.1	4.3	3.8	47.1
■ Asian	100	41.3	40.1	30.3	20.3	19.5	64.2
□ African American	100	20.7	8.3	7.1	2.7	2.2	31.0
□ White	100	38.8	24.0	21.2	11.8	11.2	52.6
■ Hispanic	100	31.1	17.2	13.9	7.7	7.3	52.7
□ Pac Isl/Filipino	100	37.5	25.5	23.2	13.1	12.0	51.7
■ Other	100	34.7	23.1	19.7	10.8	9.4	47.9

Figure 57. Freshmen Ethnic Groups and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: The percentage of enrollments in English, math, and both courses reveal striking differences based upon student ethnicity. The completion values show differences as well. Asian students have the highest transfer ready rate followed by Hispanic and white students. African American and American Indian students have the lowest transfer ready rates. Once again, the ending rates are based upon substantial differences in counts. The following numbers were used to determine transfer ready rate percentages: American Indian 8 of 17, Asian 113 of 176, African American 18 of 58, white 580 of 1,102, Hispanic 59 of 112, Pacific Islander + Filipino 31 of 60, and other ethnicity, 34 of 71.

Transfer Ready Stages by Age Group

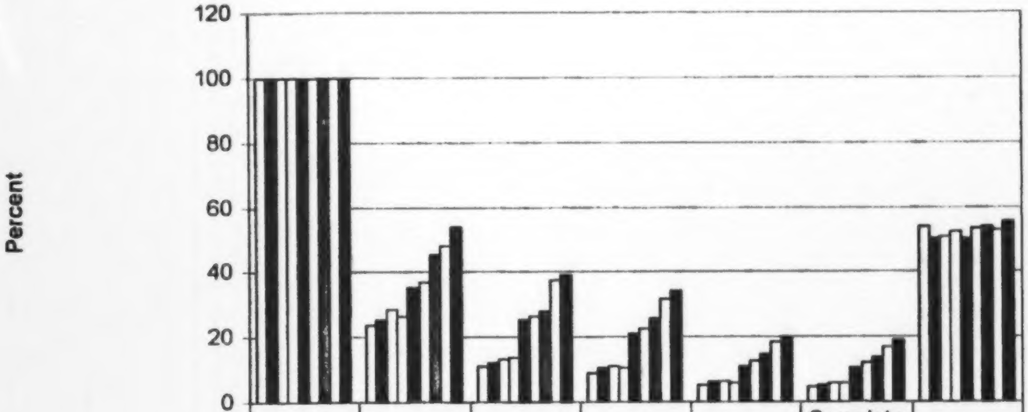


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
□<18	100	46.9	35.8	28.9	15.0	14.2	49.3
■18-20	100	51.1	35.0	30.5	17.2	16.1	52.7
□21-24	100	19.9	7.3	5.5	3.0	2.9	51.9
□25-29	100	15.6	5.3	3.8	2.2	2.1	55.6
■30-39	100	10.6	2.5	1.9	1.4	1.4	76.5
□40+	100	6.6	0.8	0.7	0.4	0.4	60.0

Figure 58. Freshmen Age Groups and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment**:** This graph shows that the youngest students (<18 to 20) have the highest percentages of the enrollment and completion of English and math. Yet the transfer ready percentages for older groups are higher. This is because of differences in counts. The following numbers were used to determine transfer ready rate percentages: For <18, 37 of 75; for 18-20, 747 of 1,418; for 21-24, 28 of 54; for 25-29, 15 of 27; for 30-39, 13 of 17; and for 40+, 3 of 5. It is clear that student ages of 18-20 drive the transfer ready model.

Transfer Ready Stages by Self-Reported Income

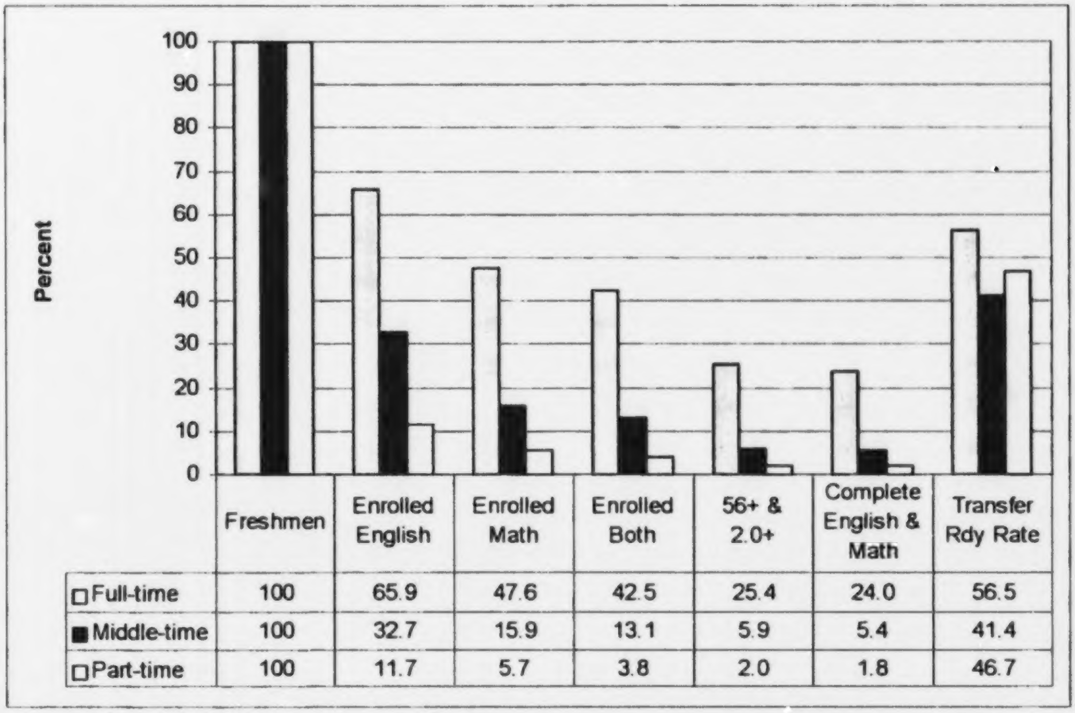


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
□Less Than $7,500	100	23.6	10.9	8.9	5.2	4.8	54.0
■$7,500-$9,999	100	25.4	12.1	10.4	6.2	5.2	50.0
□$10,000-$14,999	100	28.3	13.0	11.4	6.5	5.8	50.6
□$15,000-$19,999	100	26.7	13.6	10.7	5.9	5.6	52.5
■$20,000-$24,999	100	35.7	25.4	21.2	11.3	10.6	50.0
□$25,000-$29-999	100	37.2	26.6	22.7	12.6	12.1	53.3
■$30,000-$34,999	100	45.3	28.2	25.9	14.8	14.0	54.1
□$35,000-$39,999	100	48.0	37.6	31.9	18.5	16.9	53.0
■$40,000 or More	100	53.8	39.2	34.5	20.0	19.2	55.7

Figure 59. Freshmen Self-Reported Incomes and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: Substantially higher rates of enrollment and completion of English and math start with incomes levels of $20,000 or more. Slightly higher transfer ready rates are also associated with higher incomes as are overall course success rates.

Transfer Ready Stages by Enrollment Status

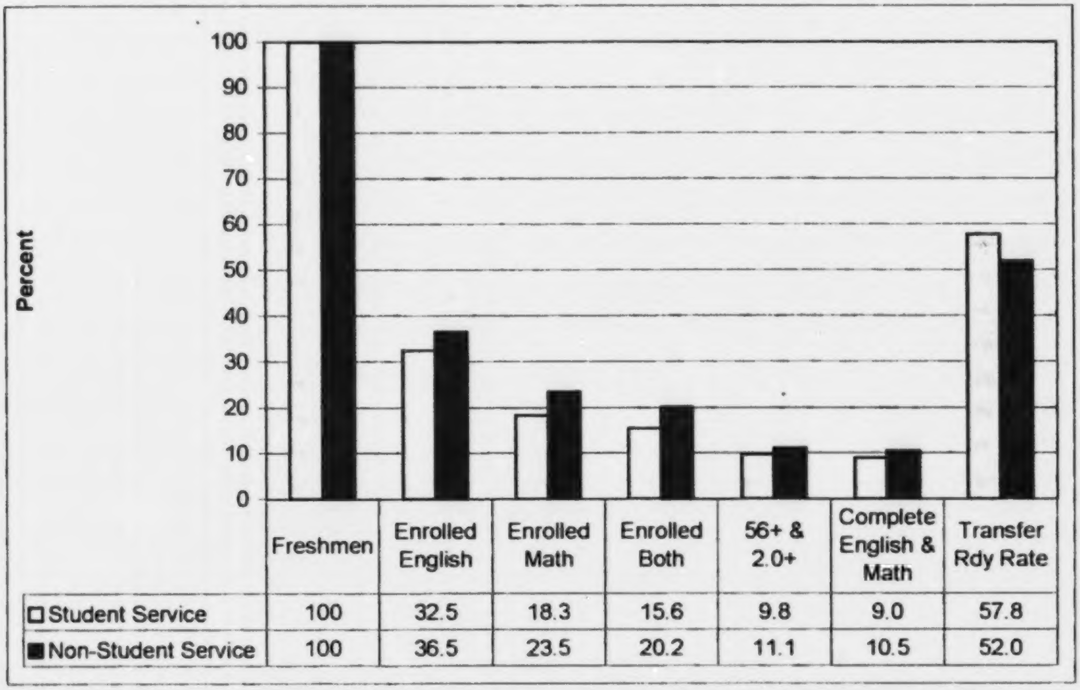


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
□ Full-time	100	65.9	47.6	42.5	25.4	24.0	56.5
■ Middle-time	100	32.7	15.9	13.1	5.9	5.4	41.4
□ Part-time	100	11.7	5.7	3.8	2.0	1.8	46.7

Figure 60. Initial Course Loads For Freshmen and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: Organized by initial course load, freshmen that are full-time essentially drive this model by producing large counts that their percentages are based upon. It is also expected that part-time students will take longer than four years to complete the transfer ready requirements provided they even have a goal of wanting to transfer to a university.

Transfer Ready Stages by Student Service Groups

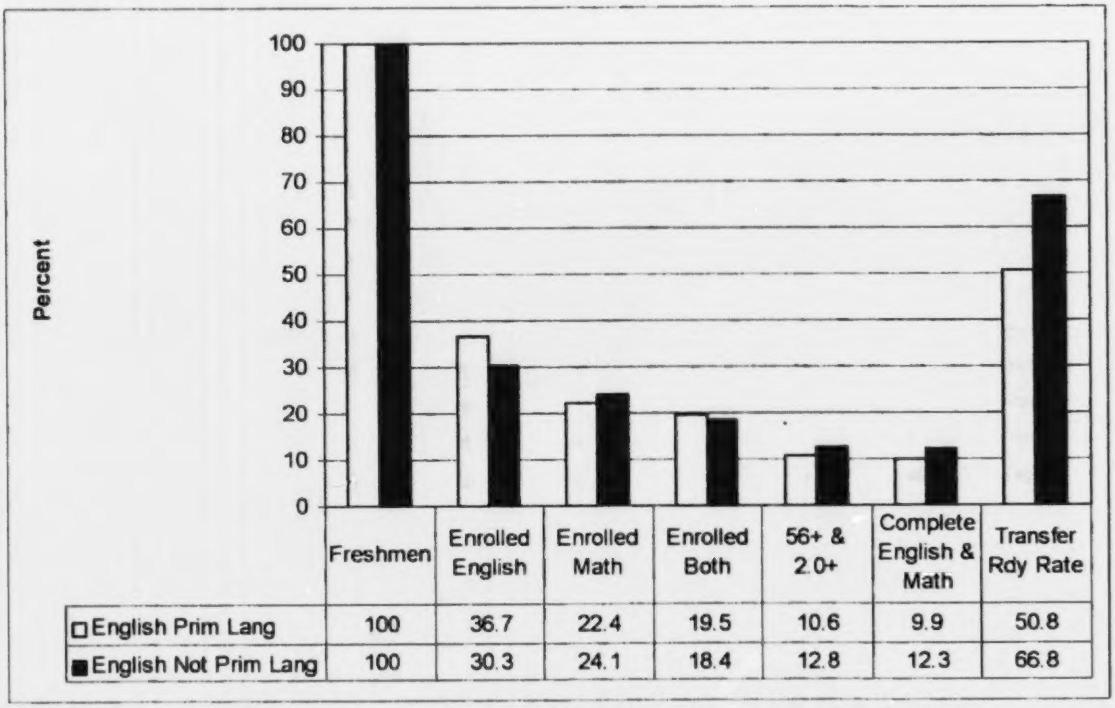


	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
☐ Student Service	100	32.5	18.3	15.6	9.8	9.0	57.8
■ Non-Student Service	100	36.5	23.5	20.2	11.1	10.5	52.0

Figure 61. Freshmen in a Student Service and the Percentages Who Reach Various Stages of the Transfer Ready Model.

Comment: The counts are smaller for all freshmen in a student service (n = 1,447) compared with no student service affiliation (n = 6,789). Yet the student service group produced a higher transfer ready rate. This finding corresponds with higher benchmark achievements and some higher success rates for students connected with a student service.

Transfer Ready Stages by ESL/Non-ESL



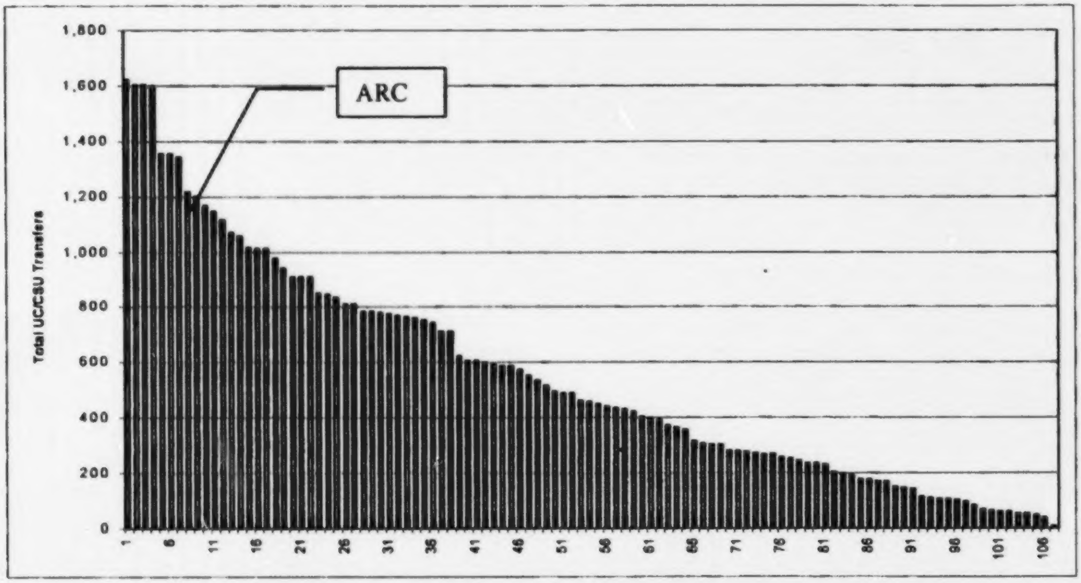
	Freshmen	Enrolled English	Enrolled Math	Enrolled Both	56+ & 2.0+	Complete English & Math	Transfer Rdy Rate
☐ English Prim Lang	100	36.7	22.4	19.5	10.6	9.9	50.8
■ English Not Prim Lang	100	30.3	24.1	18.4	12.8	12.3	66.8

Figure 62. The Transfer Ready Stages and Transfer Ready Rates for ESL and Non-ESL Students.

Comment: The various stages of the transfer ready model show that the ESL cohort is slightly ahead of Non-ESL students in math enrollment, completing 56+ units of transfer work with a GPA of 2.0+, and successfully completing the transfer level English and math courses. Because of these factors, the ESL students have a much higher transfer-ready rate, 66.8%. In other sections of this report, it was noted that ESL students out performed Non-ESL students on practically every achievement measure.

Direct Transfers: The CPEC Transfer Counts to CSU/UC 1996-2001

There is still some undercounting of out-of-state and private transfers although matters are improving. Given this situation, it was decided to report only transfers to the UC and CSU systems and compare ARC against all other public community colleges in California.



Academic Year	Transfer Counts	State Ranking	State Percentile
1996-1997	1,234	10th	92nd
1997-1998	1,183	9th	93rd
1998-1999	1,119	9th	93rd
1999-2000	1,193	9th	93rd
2000-2001	1,215	8th	94th

Figure 63. ARC Students Who Transferred to the UC and CSU Systems by Year as Reported by CPEC.

Comment: Transfer counts are still somewhat difficult to interpret in that they do not represent any particular cohort (e.g., new freshmen). Thus one cannot determine a percent that eventually transfer. However, the State Chancellor's office is presently working on establishing a transfer rate for all community colleges. Unfortunately, we dislike the planned definition of the denominator in computing such a rate[1]. In ARC's data there are some ups and downs in transfer counts. However, the state rankings and the corresponding percentile ranks reveal that ARC has improved its ordinal position in the last five years (10th to 8th) and continues to be above the 90th percentile.

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[1] The State Chancellor's Office definition: The denominator in establishing a transfer rate: all freshmen who enroll in a transfer level English course or enroll in a transfer level math course, and complete any 12 units (transfer or not) within six years of opportunity. The numerator is evidence of having transferred.

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Summary of Degrees, Certificates, and the Transfer Function

- The number of associate degrees has increased by 16.5% from five years ago. The number of certificates has dramatically increased by 163%.

- As has been stated in an earlier summary section, there is a difference in percentages between completing 60 units versus earning an associate degree. Given four years of opportunity, 15.7% of freshmen had completed 60 units. Yet only 7% had been awarded the degree. This means that only 44% of the 60-unit students earned an associate degree.

- The transfer directed rates remained steady; the transfer ready rates have increased from what they were five years ago, up approximately 12%.

- Freshmen, who are recent high school graduates compared against all other freshmen, have higher rates of enrolling in transfer level English, enrolling in transfer level math, and in completing those courses plus 56+ other transfer units.

- There are substantial differences in the various transfer ready stages among freshmen ethnic groups. These differences show up immediately with enrollment in a transfer level English course, e.g., English 1A.

- The younger students (18 to 20) produce the highest rates of achievement through the various stages of the transfer ready model. Also shown to have elevated rates are the groups with a higher self-reported income, full-time loads, and a student service group affiliation on campus.

- Students whose primary language is not English, show higher transfer ready rates than Non-ESL students.

- The transfer counts from ARC to CSU and UC have increased recently. The rank-order position of ARC relative to all other public California community colleges has improved by going from 10th to 8th in the state (highest count given a rank of 1). The ranking of 8th also corresponds to the 94th percentile.

Implications for Planning

1. Develop a general plan for increasing the number of students who achieve associate degrees. Especially pertinent is decreasing the large percentage difference between students earning 60 units and being awarded the associate degree.

2. Compare the ARC graduation requirements against what is minimally needed to transfer to the CSU system. Attempt to reduce the differences and consider revision of ARC graduation requirements.

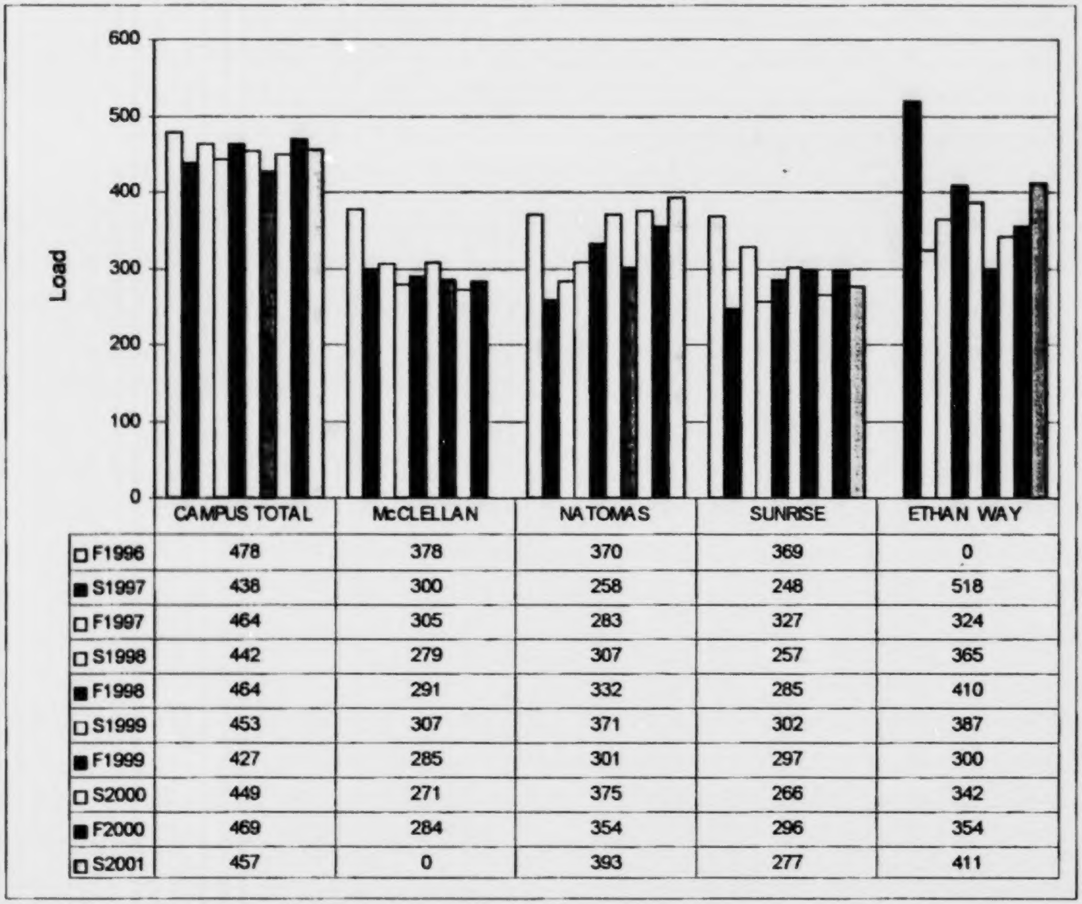
3. If possible, remove all non-critical obstacles to attaining a degree.

4. Improve information about transfer opportunities to a university. Consider an automatic analysis of transcripts for students approaching the necessary number of units for transfer. Notify students about what courses they lack and should take in their last semester at ARC in order to transfer.

Faculty Productivity

Productivity involves the basic counts - student head counts and weekly student contact hours (WSCH). While these data do not directly reflect the quality of an institution, such basic numbers, if favorable, mean more dollars - the lifeblood of our college system and a precursor to quality. This section gives load by term for five academic years.

ARC Productivity by Semester

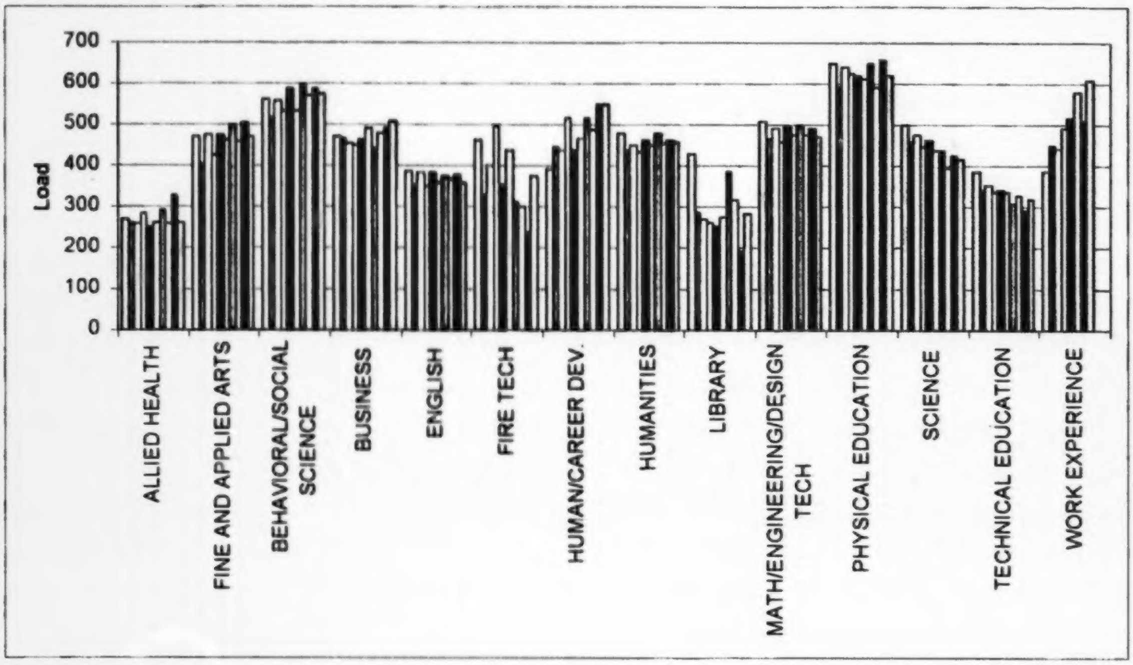


	CAMPUS TOTAL	McCLELLAN	NATOMAS	SUNRISE	ETHAN WAY
□ F1996	478	378	370	369	0
■ S1997	438	300	258	248	518
□ F1997	464	305	283	327	324
□ S1998	442	279	307	257	365
■ F1998	464	291	332	285	410
□ S1999	453	307	371	302	387
■ F1999	427	285	301	297	300
□ S2000	449	271	375	266	342
■ F2000	469	284	354	296	354
□ S2001	457	0	393	277	411

Figure 64. Productivity (Load) by Location and by Semester for Five Years.

Comment: Based upon campus total, the average load for fall semesters is 460.4 while the average for spring semesters is 447.8. Comparing fall 1996 to fall 2000, there has been 1.9% decrease. Comparing the two spring semesters (1997 & 2001) there has been a 4.3% increase. Examining the vertical bars would not suggest a clear trend over the five years, albeit the campus total appears relatively stable and the Ethan Way Center and Natomas Center are on the upswing.

Productivity by Area

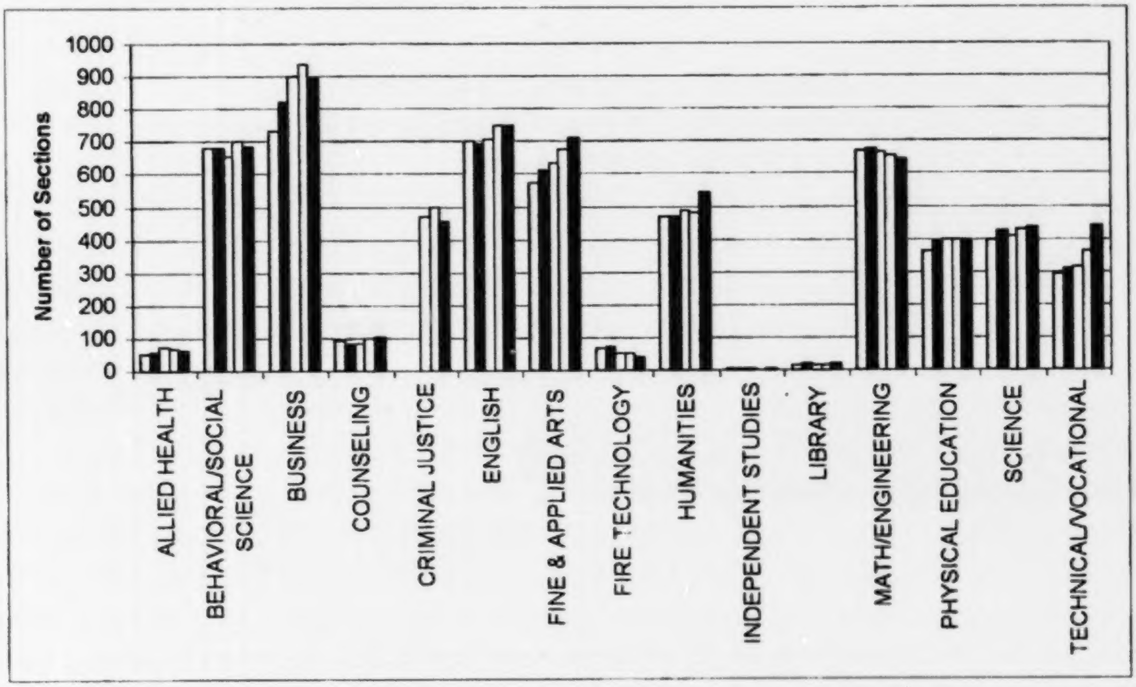


	F1996	S1997	F1997	S1998	F1998	S1999	F1999	S2000	F2000	S2001
ALLIED HEALTH	269	262	259	285	251	262	292	258	330	261
FINE AND APPLIED ARTS	472	406	473	425	474	464	498	459	504	471
BEHAVIORAL/SOCIAL SCIENCE	563	516	558	533	587	535	596	569	588	577
BUSINESS	471	466	456	450	463	493	443	481	491	507
ENGLISH	388	353	384	352	382	360	373	368	380	358
FIRE TECH	461	331	402	495	353	439	313	302	239	377
HUMAN/CAREER DEV.	393	444	437	515	438	466	518	489	551	552
HUMANITIES	481	436	450	433	462	448	478	454	462	459
LIBRARY	428	288	271	264	256	273	389	318	190	285
MATH/ENGIN/DESIGN TECH	507	467	490	458	494	475	502	473	492	470
PHYSICAL EDUCATION	649	592	641	627	621	613	649	590	659	622
SCIENCE	498	457	477	447	464	436	436	396	427	415
TECHNICAL EDUCATION	386	342	354	339	341	336	307	328	292	319
WORK EXPERIENCE	388	449	442	493	517	580	507	608	0	0

Figure 65. Load (WSCH divided by FTE) by Area for 10 terms (Five Years).

Comment: Means were computed across all semesters (rows) for each area: AH =273; FAA=465; BSS=562; BUS=472; ENG=370; FT=371; HCD=480; HUM=456; LIB=296; MEDT=483; PE=626; SCI=445; TE=334; WE= 498 (8 terms only). Column means in F96 =454; F00=431; S97=415; S01=436.

Number of Sections Offered by Area for Five Academic Years

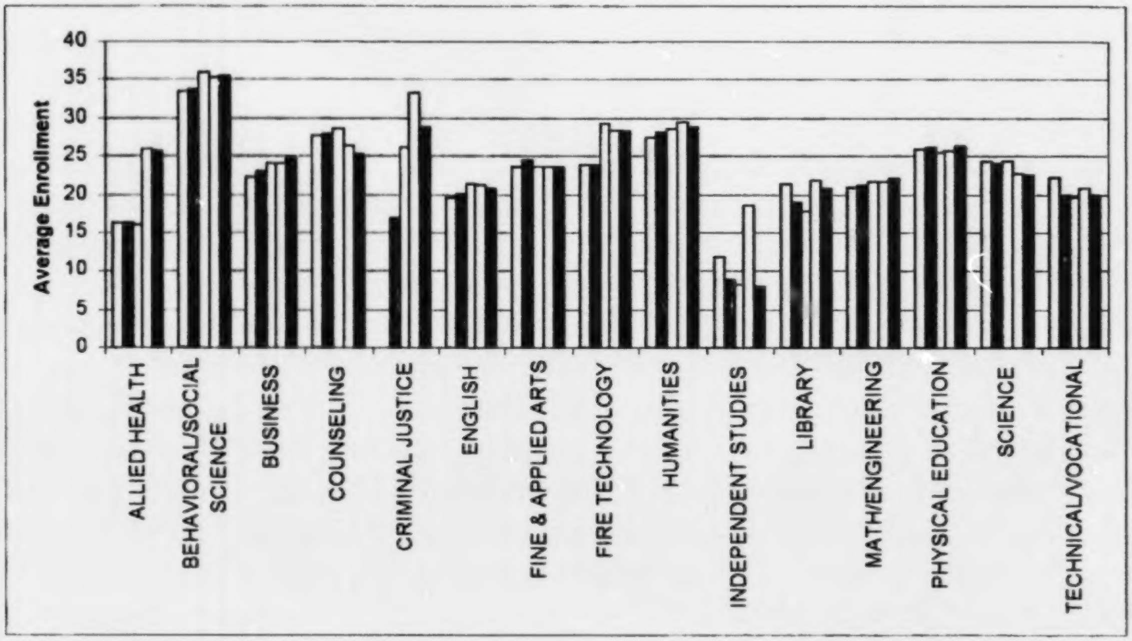


	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
ALLIED HEALTH	54	59	73	67	62
BEHAVIORAL/SOCIAL SCIENCE	683	680	656	699	685
BUSINESS	732	824	901	939	897
COUNSELING	92	85	83	97	105
CRIMINAL JUSTICE	0	1	473	495	453
ENGLISH	704	692	708	748	749
FINE & APPLIED ARTS	575	612	636	676	711
FIRE TECHNOLOGY	66	74	52	53	40
HUMANITIES	472	472	488	482	546
INDEPENDENT STUDIES	4	5	6	2	3
LIBRARY	15	21	15	18	22
MATH/ENGINEERING	669	678	667	655	642
PHYSICAL EDUCATION	363	393	399	399	399
SCIENCE	396	422	408	427	437
TECHNICAL/VOCATIONAL	292	307	315	361	438

Figure 66. Number of Sections Offered by Individual Area for Five Academic Years.

Comment: Most academic areas show evidence of increasing the number of sections from five years ago, although there are exceptions (e.g., math/engineering, fire technology).

Average Course Enrollments by Area for Five Academic Years



	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
ALLIED HEALTH	16.4	16.4	16.2	25.9	25.6
BEHAVIORAL/SOCIAL SCIENCE	33.6	33.7	35.9	35.3	35.6
BUSINESS	22.3	23.0	24.1	24.1	24.9
COUNSELING	27.6	27.9	28.5	26.3	25.2
CRIMINAL JUSTICE	0.0	17.0	26.1	33.2	28.9
ENGLISH	19.7	20.1	21.4	21.2	20.8
FINE & APPLIED ARTS	23.6	24.6	23.6	23.6	23.7
FIRE TECHNOLOGY	24.0	23.9	29.2	28.3	28.3
HUMANITIES	27.4	28.1	28.5	29.5	28.9
INDEPENDENT STUDIES	11.8	9.0	8.2	18.5	8.0
LIBRARY	21.5	19.1	17.9	21.9	20.8
MATH/ENGINEERING	21.1	21.2	21.6	21.7	22.1
PHYSICAL EDUCATION	25.9	26.1	25.4	25.7	26.3
SCIENCE	24.3	24.2	24.3	22.9	22.5
TECHNICAL/VOCATIONAL	22.4	20.0	19.6	20.8	19.8

Figure 67. Average Course Enrollment by Area for Five Academic Years.

Comment: As with the number of sections, most academic areas have increased the average class size from five years ago, exceptions being Counseling, Independent Studies, Library, Science and Technical/Vocational.

Summary of Productivity Section

- The average load for fall semesters over the past five years is 460 while the average load for spring semesters is 448.
- There is an upward and recovering trend at the Natomas Center that approached its high from fall 1996 (370). Currently, the value there is 393 (spring semester of 2001).
- Sunrise Center has also had variations in load. In fall of 2000, the value of 296 represents a drop of 20% from the all time high in fall 1996 at 369.
- Ethan Way had its highest productivity value in spring 1997 at 518. The up and down variations still show an upward and recovering trend, presently at 411 during spring of 2001.
- Most Academic areas show evidence of increasing the number of course sections as well as the average class size.

Implications for Planning

1. Establish the present maximum seating capacity for all courses and rooms.
2. Develop strategies for dealing with further increases in enrollments.

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